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## ABSTRACT

In 5 chapters, 3 tables, and 43 figures, the authors describe national educational trends from 1970 to 1980 and project trends to 1990-91. This edition of "Projections" is the first one to be published in two volumes, to include a separate chapter on the demographics underlying the projections, and to omit projections of degrees by field of study. The report covers enrollments at all educational levels, numbers of high school graduates and earners of higher education degrees, numbers of instructional staff, and educational expenditures at all levels. All enrollment data are shown by organizational level and public or private control. Higher education enrollment data are controlled for the additional variables of student age, sex, and attendance status, two- or four-year program, and undergraduate or graduate level. Projections of teacher supply and demand are shown for full- or part-time status, academic rank, school educational level, and public or private control. The authors predict decreases through 1991 in high school graduates and, in higher education, in enrollment, instructional staff, total expenditures, and bachelor's degrees granted. Increases are expected in enrollment, teachers, and expenditures in all elementary and secondary schools. The financial data cover total expenditures, teacher salaries, capital outlays, and interest payments, in current (1980-81) dollars. The appendices contain a general description of the major forecasting techniques, constant dollar indexes from 1970-71 to 1980-81, and a glossary. (MLF)

# Projections of Education Statistics to 1990-91

National  
Center for  
Education  
Statistics

## Volume I

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EA 015 150

# Projections of Education Statistics to 1990-91

## Volume I: Analytical Report

by

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Debra E. Gerald

National Center for  
Education Statistics

**U.S. Department of Education**

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**National Center for Education Statistics**

"The purpose of the Center shall be to collect and disseminate statistics and other data related to education in the United States and in other nations. The Center shall . . . collect, collate, and, from time to time, report full and complete statistics on the conditions of education in the United States; conduct and publish reports on specialized analyses of the meaning and significance of such statistics; . . . and review and report on education activities in foreign countries."--Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e-1).

## Foreword

This edition of *Projections of Education Statistics* is the second biennial report presenting projections of statistics for elementary and secondary schools and institutions of higher education. The projections in this edition supersede those shown in the *Projections of Education Statistics to 1988-89*, 1980 edition.

In this report, projections are presented for statistics on enrollments, graduates, teachers, and expenditures for the period of 1980-81 to 1990-91. Each chapter addresses a different facet of the education system. Chapter I describes the demographics of education. Chapter II presents projections of enrollments in elementary and secondary schools and institutions of higher education. Chapter III contains projections of graduates in high schools, colleges and universities. In Chapter IV, projections of supply and demand of teachers are illustrated. Finally, Chapter V presents projections of expenditures in elementary and secondary schools and institutions of higher education.

For most of the series in this publication, high, intermediate, and low alternative projections are presented. These are based on three alternative sets of explicitly stated assumptions. Although the intermediate projections are the "preferred" set of projections, the high and low alternatives supply a range of possible future outcomes.

A summary of these projections is available separately in a pocket-sized folder entitled *Trends in Education, 1970-71 to 1990-91*.

Nancy-Jane Stubbs  
Assistant Administrator for  
Statistical Services  
March 1982

## Acknowledgments

*The Projections of Education Statistics to 1990-91* was prepared by the National Center for Education Statistics (NCES) in the Division of Statistical Services under the supervision of Nancy-Jane Stubbs, Assistant Administrator for Statistical Services, and Forrest W. Harrison, Chief of the Statistical Information Branch.

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## For More Information

Information about the Center's statistical program and a catalog of NCES publications may be obtained from the Statistical Information Office, National Center for Education Statistics, 1001 Presidential Building, 400 Maryland Avenue SW., Washington, D.C. 20202, telephone (301) 436-7900.

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# Highlights

If present trends continue, decreases can be expected in:

- Full-time equivalent enrollment in all institutions of higher education:  
—From 8.7 million in 1980 to 8.4 million in 1990;
- High school graduates from all public and private schools:  
—From 3.1 million in 1979-80 to 2.4 million in 1990-91;
- Bachelor's degrees granted by institutions of higher education:  
—From 929,417 in 1979-80 to 922,000 in 1990-91;
- Full-time equivalent instructional staff in institutions of higher education:  
—From 624,000 in 1980 to 589,000 in 1990.
- Total expenditures of institutions of higher education:  
—From \$70.4 billion in 1980-81 to \$66.6 billion in 1990-91 (1980-81 dollars).

And increases can be expected in:

- Enrollment in all regular public and private elementary and secondary schools:  
—From 46.1 million in 1980 to 46.7 million in 1990;
- Full-time equivalent teachers in all regular public and private elementary and secondary schools:  
—From 2.4 million in 1980 to 2.6 million in 1990;
- Total expenditures of all regular public and private elementary and secondary schools:  
—From \$117.9 billion in 1980-81 to \$138.8 billion in 1990-91 (in 1980-81 dollars).

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# Introduction

## Guide to the Publication

This is the 16th edition of *Projections*, which provides a consistent set of projections for most key education statistics.

*Projections* contains a variety of tables, charts and narrative presenting enrollment, teacher, graduate and expenditure data for the past 11 years and projections for the next 10 years. The tables and charts in each chapter of Volume I (Analytical Report) are preceded by a narrative which highlights the major findings of the chapter. In addition, the narratives include analyses of past trends and describe future scenarios that are consistent with the projections shown in the tables.

Table 1 and figure 1 in this introduction show summaries of the percent changes from 1970-71 to 1980-81 and from 1980-81 to 1990-91 for most key statistics.

Volume II of this publication (Methodological Report) gives detailed technical explanations of the methods used in developing projections. It also contains sections describing the statistical universe for each series, the basic assumptions underlying each projected series, methods used to make estimates for missing data in past time series, and tables of data used in making projections.

## Changes in this Edition

This is the first edition of *Projections* to be published in two volumes. The purpose of having separate analytical and methodological volumes is twofold. The first objective is to increase the amount of analysis and graphic presentations in the narrative sections of Volume I and to move the technical material that previously was included in the narrative to Volume II. The second objective is to reduce publication costs, since it is assumed that the demand for

the Methodological Report will be much less than for the Analytical Report.

This edition also is the first to include a separate chapter on the demographics underlying the projections of education time series. Chapter I shows the annual number of births from 1940 to 1990 and describes how the size of these birth cohorts has long-range implications for future enrollment levels.

Another major change in this edition is the absence of projections of degrees by field of study. Evaluations of past degree-by-field projections have indicated that these projections were not accurate enough to be of any real value for policy planners. In addition, the effort required to make such projections acceptable is currently beyond the scope of NCES. A major shortcoming in this area is the lack of a large staff with detailed knowledge of the job market for graduates in each field of study, which has a major impact on the number of future graduates by field. Furthermore, the general lack of enrollment data by field of study does not allow for the anticipation of short-term shifts in the distribution of degrees by field.

## Caveats

Projections of time series into the future are subject to errors from many sources. This is because of the inherent nature of the statistical universe from which the basic data are obtained and the properties of the projection methodologies, which depend on the validity of many assumptions. Therefore, anyone using projections is cautioned against placing too much confidence in the accuracy of their numerical values. To emphasize this fact, alternative projections are shown for most statistical series. These alternatives are not statistical confidence intervals, but instead represent judgments made by the authors as to reasonable upper and lower levels for each projected series.

**Figure 1.—Selected education statistics: 50 States and D.C., 1970, 1980 and 1990**  
(In thousands)

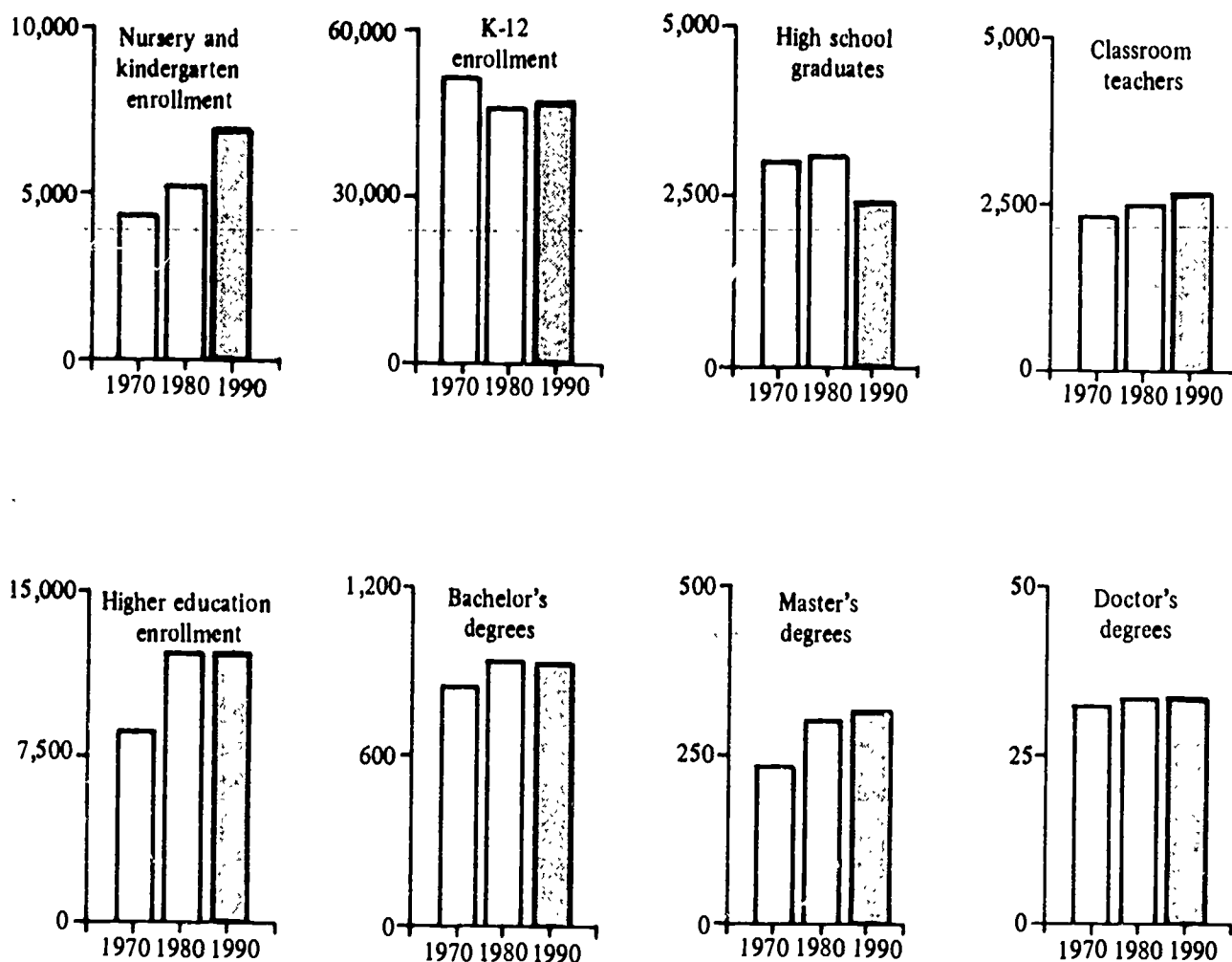


Table 1.—Summary of trends in education: 50 States and D.C., 1970-71 to 1990-91

Characteristic	1970-71	1980-81	Percent change, 1970-71 to 1980-81	1990-91 <sup>1</sup> (Projected)	Percent change, 1980-81 to 1990-91
School-age and college-age populations <sup>2</sup> :	(Thousands)			(Thousands)	
5-13 .....	36,636	30,199	-18	32,568	8
14-17 .....	15,911	15,764	-1	12,771	-19
Average of 17 and 18 .....	3,812	4,163	9	3,321	-20
18-24 .....	24,687	29,463	19	25,148	-15
25-34 .....	25,293	36,172	43	41,086	14
35-44 .....	23,142	25,721	11	36,592	42
Public school districts .....	18.0	15.9	-12	—	—
Operating .....	17.2	15.6	-9	—	—
Nonoperating .....	.8	.3	-62	—	—
Enrollment:					
Elementary and secondary:					
Nursery and kindergarten .....	4,279	5,162	21	6,877	33
K-grade 12 .....	51,272	<sup>3</sup> 46,095	-10	46,667	1
K-8 .....	36,629	<sup>3</sup> 31,378	-14	34,244	9
9-12 .....	14,643	<sup>3</sup> 14,717	1	12,423	-16
Public .....	45,909	<sup>3</sup> 40,995	-11	41,267	1
K-8 .....	32,577	<sup>3</sup> 27,678	-15	30,244	9
9-12 .....	13,332	<sup>3</sup> 13,317	0	11,023	-17
Private .....	5,363	<sup>3</sup> 5,100	-5	5,400	6
Higher education:					
Total .....	8,581	12,097	41	12,101	0
Public .....	6,428	9,457	47	9,616	2
Private .....	2,153	2,640	23	2,485	-6
4-year .....	6,358	7,571	19	7,101	-6
2-year .....	2,223	4,526	104	5,000	10
Men .....	5,044	5,874	16	5,770	-2
Women .....	3,537	6,223	76	6,331	2
Full-time .....	5,815	7,098	22	6,536	-3
Part-time .....	2,766	4,999	81	5,565	11
Undergraduate .....	7,376	10,475	42	10,334	-1
Graduate .....	1,031	1,343	30	1,437	7
First-professional .....	175	278	59	330	19
Full-time-equivalent .....	6,737	8,749	30	8,428	-4

See footnotes at end of table.

Table 1.—Summary of trends in education: 50 States and D.C., 1970-71 to 1990-91—Continued

Characteristic	1970-71	1980-81	Percent change, 1970-71 to 1980-81	1990-91 <sup>1</sup> (Projected)	Percent change, 1980-81 to 1990-91
	(Thousands)			(Thousands)	
Instructional staff:					
Elementary and secondary					
Classroom teachers .....	2,288	2,439	7	2,642	8
Elementary .....	1,281	1,362	6	1,654	21
Secondary .....	1,007	1,077	7	988	-8
Public .....	2,055	2,163	5	2,333	8
Elementary .....	1,128	1,175	4	1,440	23
Secondary .....	927	988	7	893	-10
Private .....	233	276	18	309	12
Higher education:					
Instructional staff .....	573	846	48	799	-6
Full-time-equivalent .....	451	624	38	589	-6
High school graduates <sup>4</sup> .....	2,944	3,021	3	2,350	-22
Public .....	2,644	2,721	3	2,050	-25
Private .....	300	300	0	300	0
Boys .....	1,457	1,480	2	1,154	-22
Girls .....	1,487	1,541	4	1,196	-22
High school equivalency credentials .....	—	490	—	560	14
Earned degrees <sup>4</sup> :					
Bachelor's .....	840	932	11	922	-1
Men .....	476	470	-1	452	-4
Women .....	364	462	27	470	2
First-professional .....	38	72	89	74	3
Men .....	36	54	50	52	-4
Women .....	2	18	800	22	22
Master's .....	231	298	29	303	2
Men .....	138	148	7	151	2
Women .....	92	150	63	152	1
Doctor's .....	32	33	3	33	0
Men .....	28	23	-18	18	-22
Women .....	5	10	100	15	50

See footnotes at end of table.



Table 1.—Summary of trends in education: 50 States and D.C., 1970-71 to 1990-91—Continued

Characteristic	Current unadjusted dollars		Constant 1980-81 dollars
	1970-71	1980-81	1990-91

(Billions of dollars)

Total expenditures by regular educational institutions <sup>5</sup> :			
All levels .....	78.3	188.3	205.4
Public .....	63.6	151.7	167.4
Private .....	14.7	36.7	37.9
Elementary and secondary			
schools .....	51.4	117.9	138.8
Public .....	46.0	105.0	122.8
Private .....	5.4	12.9	16.0
Institutions of higher			
education .....	26.9	70.4	66.6
Public .....	17.6	46.7	44.6
Private .....	9.3	23.8	21.9

(Dollars)

Current expenditure per pupil in average daily attendance in public elementary-secondary schools .....	911	2,553	3,053
--	-----	-------	-------

— Not applicable

<sup>1</sup>Intermediate alternative projections are based on assumptions and methodology shown in *Projections of Education Statistics to 1990-91*, Volume II, forthcoming. Users should check the acceptability of these assumptions for their purposes.

<sup>2</sup>Population projections are series II projections from the Bureau of the Census.

<sup>3</sup>Preliminary

<sup>4</sup>Projected in 1980-81.

<sup>5</sup>Includes current expenditures, interest and capital outlay

NOTE.—Because of rounding, details may not add to totals.

# Chapter I

## THE DEMOGRAPHICS OF EDUCATION

A study of past births not only enables us to understand past trends in enrollments, but it also gives us insight into what future enrollment patterns are apt to look like.

The annual number of births plays a dominant role in determining the future size of school-age and college-age populations. Although mortality and migration also have an impact on the size of these populations, their impact is relatively small and stable compared to births. Therefore, a knowledge of past births allows for accurate projections of school-age and college-age populations, which in turn allows for fairly accurate enrollment projections, especially for elementary and secondary schools.

As figure 2 illustrates, enrollment in kindergarten through grade 8 is nearly a mirror image of the 5- to 13-year-old population. Likewise, the enrollment in grades 9-12 closely reflects the 14- to 17-year-old population. Even the slight changes in the relationships between enrollment and population over the 1960-1990 period are easily explained. First, the proportion of children 3 to 5 years old enrolled in regular schools has increased throughout the past 20 years. And second, the population estimates and projections shown in table 3 do not include estimates of the undercount discovered by the 1980 Census enumeration. It should be pointed out that this will not affect enrollment projections significantly if the undercount throughout the projected period is proportional to the undercount in 1980, the last year for which enrollment data are available.

At the college level, the relationship between enrollment and population is not as simple as it is at the elementary and secondary school level. College enrollment is voluntary, unlike that in elementary and secondary schools, where most of the enrollment is mandatory. Therefore, population size is only one factor among many that determines college enrollment levels. In addition, the age distribution of college students has changed remarkably during the past 10 years, as increasing numbers of older students have enrolled in college. However, population continues to be a major factor in determining college enrollment levels.

### The Baby Boom

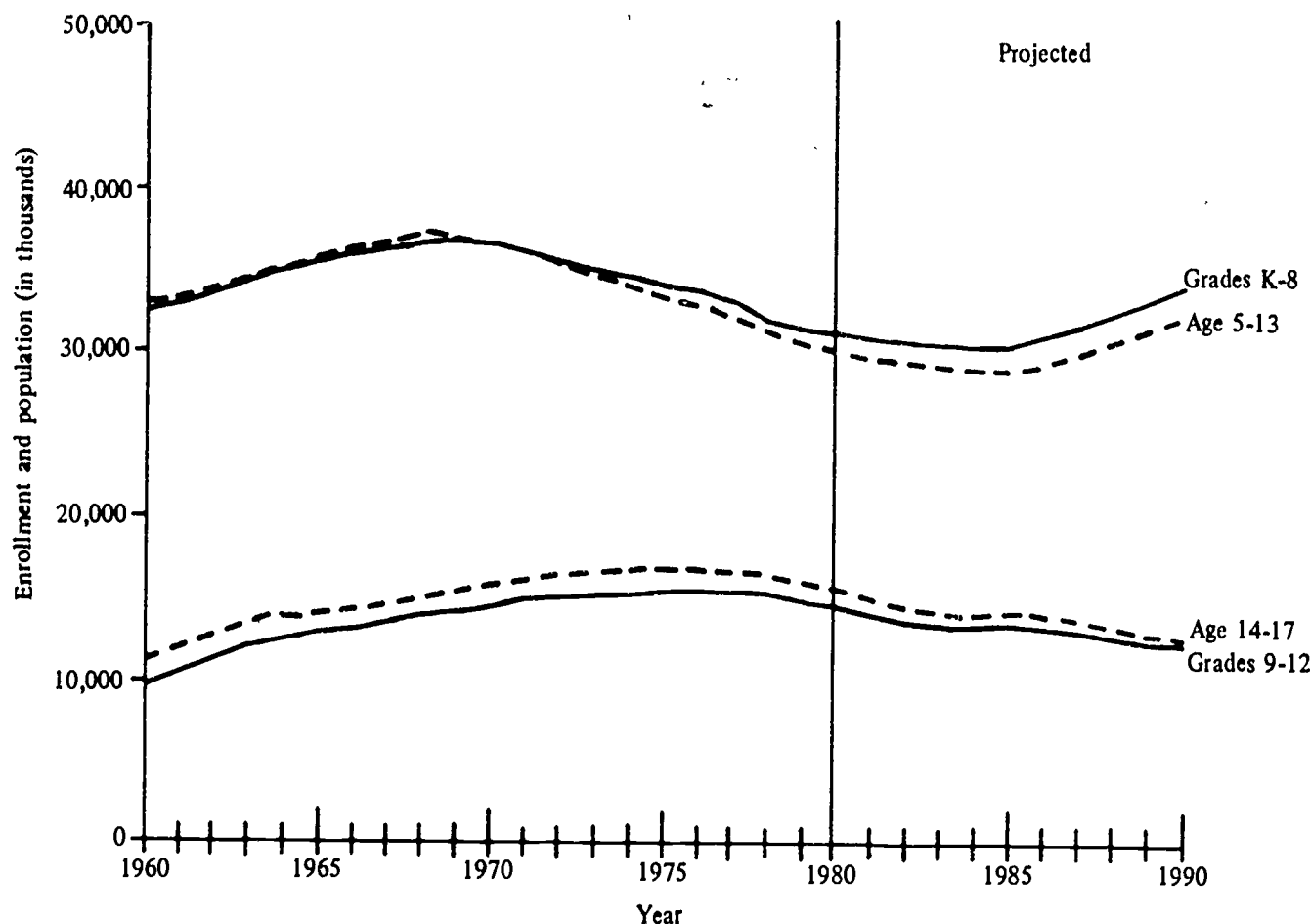
Figure 3 shows the number of past and projected annual births from 1940 to 1990. Births climbed steeply after World War II — from 2.9 million in 1945 to 3.9 million in 1946. Births dropped slightly to 3.7 million in 1947 before climbing to 4.3 million in 1956, a level that was maintained through 1960. These large birth cohorts (groups of children born during the same year) of 1946 to 1960 represent the "baby boom" which has had, and which continues to have, a major impact on American education.

In 1952, the children born in 1946 began entering the first grade, signaling the beginning of an enrollment boom that would last through 1969. By 1960, many of the children born in 1946 had progressed through elementary school and were entering grade 9, beginning the enrollment boom in secondary schools. Enrollments in elementary and secondary schools increased through the 1960's, reaching a peak of 51.3 million in 1970 — an increase of 22.5 million students over the 1950 level of 28.8 million.

As the table below shows, the period of most rapid enrollment growth was 1950 to 1965.

Year	Enrollment in kindergarten through grade 12 (millions)	Average annual change from previous listed year (millions)
1950 .....	28.8	---
1955 .....	35.3	1.4
1960 .....	42.2	1.4
1965 .....	48.5	1.3
1970 .....	51.3	0.6
1975 .....	49.8	-0.3
1980 .....	46.1	-0.7
Projected		
1985 .....	44.2	-0.4
1990 .....	46.7	0.5

Figure 2.—School-age population and enrollment in grades K-8 and 9-12: 50 States and D.C., 1960 to 1990



In 1950, the school-age population (5-17 years old) was made up of children born between 1933 and 1945. These were low-birth years of the depression and the War, preceding the post-War baby boom. The 1965 school-age population was made up of children born between 1948 and 1960, all members of the baby boom.

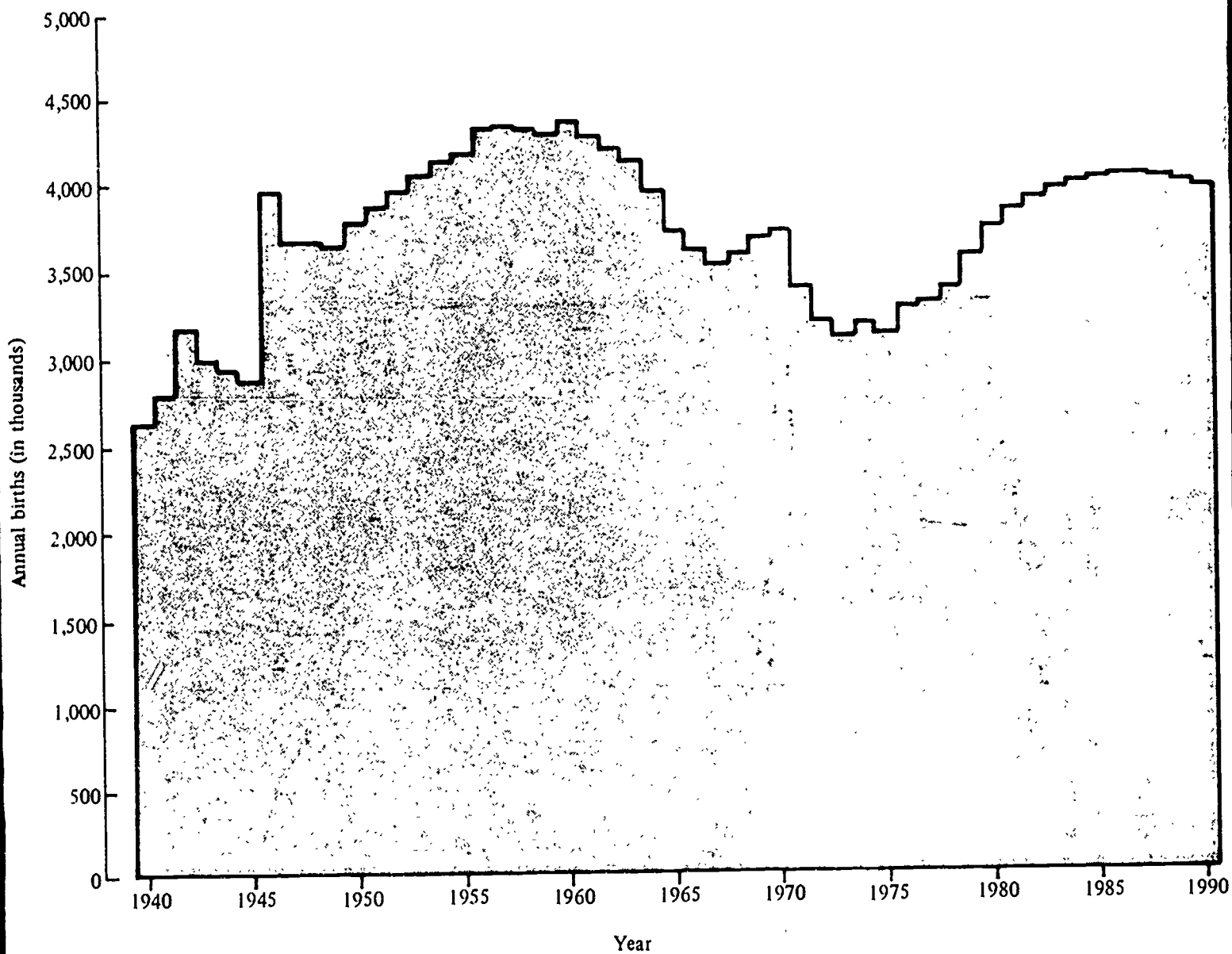
For the 1950 to 1965 period, the average annual enrollment increase exceeded 1.3 million. To put this phenomenal growth in the perspective of 1980 educational costs, an average annual increase of 1.3 million students would require an additional \$3.1 billion increase in current expenditures each year. Over the 15-year period, the cumulative cost of this increase would add up to \$353 billion<sup>1</sup> — 226 percent more than the estimated total current expenditure for all students in 1980-81. And this amount excludes the expenditures for capital outlay (the costs of new school buildings, new buses, etc.) and the interest expense incurred to finance those capital expenditures.

However, while elementary and secondary schools were faced with phenomenal enrollment growth, the baby boom generation began entering college. In 1964, students born in 1946 reached 18 years old, adding to the growth in the 18- to 24-year-old population that would continue through 1981. This expansion of the college-age population was accompanied by increased enrollment rates for all age groups throughout the 1960's and early 1970's. Increased enrollment rates were especially noticeable among women, whose rates had traditionally been lower than those for men, and among young men, whose enrollment rates were increased by young men who wanted to avoid the draft during the Vietnam War. In the 6 years from 1964 to 1970, enrollments in college increased 63 percent from 5.3 million to 8.6 million. This was more than double the 31 percent increase in the 18- to 24-year-old population.

During the 1970's, increases in college enrollment continued to outstrip increases in the traditional college-age population. To a large extent this was due to the baby

<sup>1</sup> Estimate based on the assumption that students remain in school an average of 12 years.

Figure 3.—Number of annual births: 50 States and D.C., 1940 to 1990



boom generation reaching the 25- to 34-year-old age group and the increased propensity of that group to enroll in college.

## Older Students

By 1990, the baby boom generation will dominate the 25-34 and 35-44 age groups. Should the enrollment rates in these age groups remain at levels comparable to the levels of the late 1970's and 1980, then the baby boom generation will continue to play a major role in determining college enrollment in the 1980's.

During the 1970's, as the traditional college-age population increased by nearly 20 percent, the enrollment of students less than 25 years old also increased by about 22 percent, from 6.2 million in 1970 to 7.6 million in 1980 (table 8A). However, as the baby boom generation began entering the 25- to 34-year-old age group, the enrollment of students 25 years old and over increased from 2.4 million in 1970 to 4.5 million in 1980, an 88 percent increase.

In the 1980's, the 18- to 24-year-old population is expected to decrease by 15 percent (figure 4), while the enrollment of students less than 25 years old is also expected to drop 15 percent. The resulting enrollment drop would be 1.1 million by 1990. However, this decrease is projected to be offset by the enrollment of students 25 years old and over. From 1980 to 1990, the number of older students enrolled in college is expected to increase by 1.1 million, resulting in a total enrollment of 12.1 million in 1990, the same number as in 1980.

As a result of the expected continued growth in the enrollment of older students during the 1980's and the increased enrollment of younger women during the 1970's, the age distribution of college students in 1990 is projected to be markedly different from that in 1970, as shown in figure 5. At the younger age groups (less than 25 years old), the enrollment of men is expected to decrease by 11 percent while that of younger women is expected to increase by 23 percent. These different patterns occurred because the enrollment rates of younger men were boosted in 1970, probably by the Vietnam War, while enrollment rates for younger women in 1970 still lagged behind those of men, as they had traditionally. However, with the end

Figure 4.—College-age population, by age group: 50 States and D.C., as of July 1, 1960 to 1990

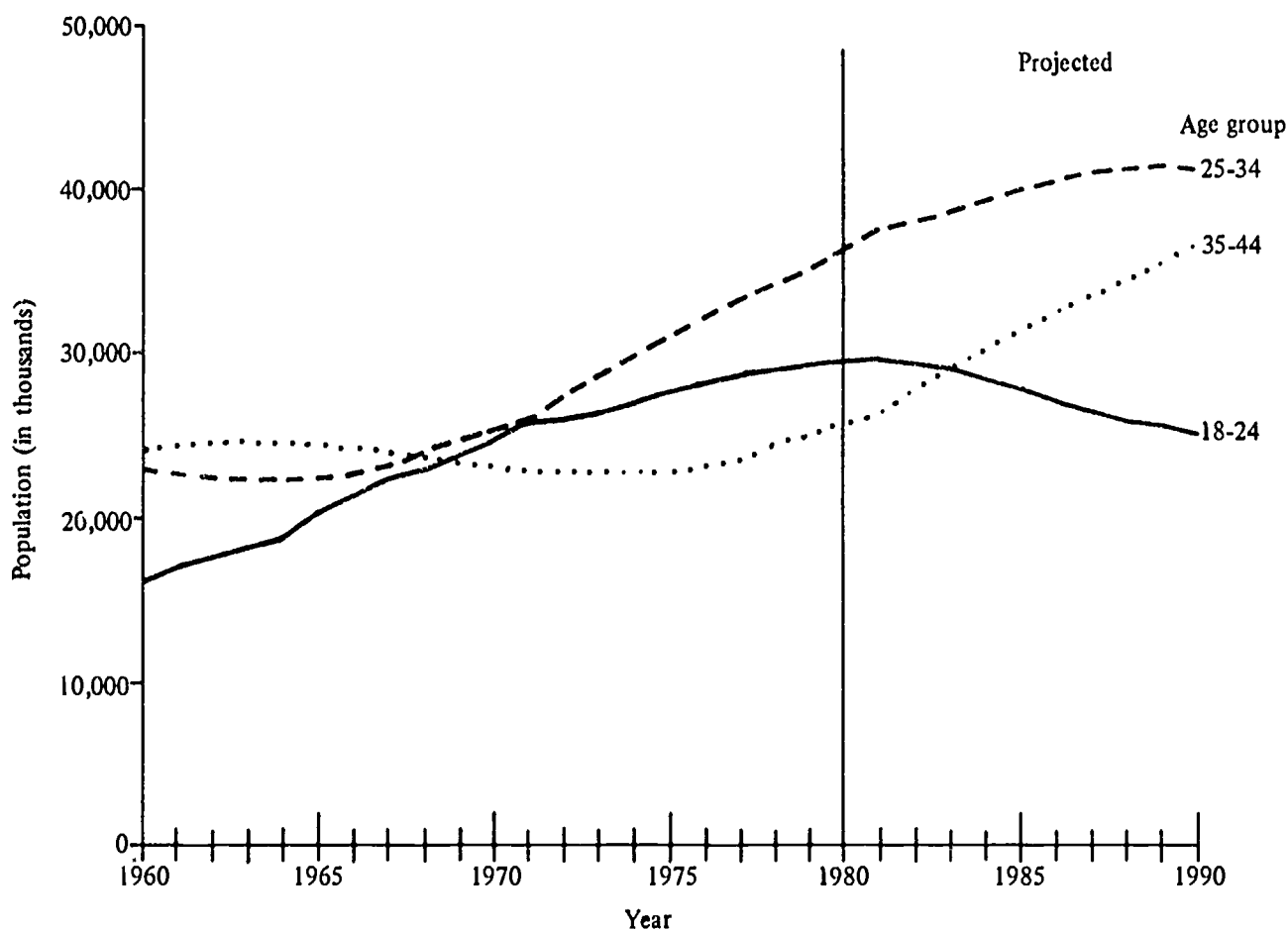
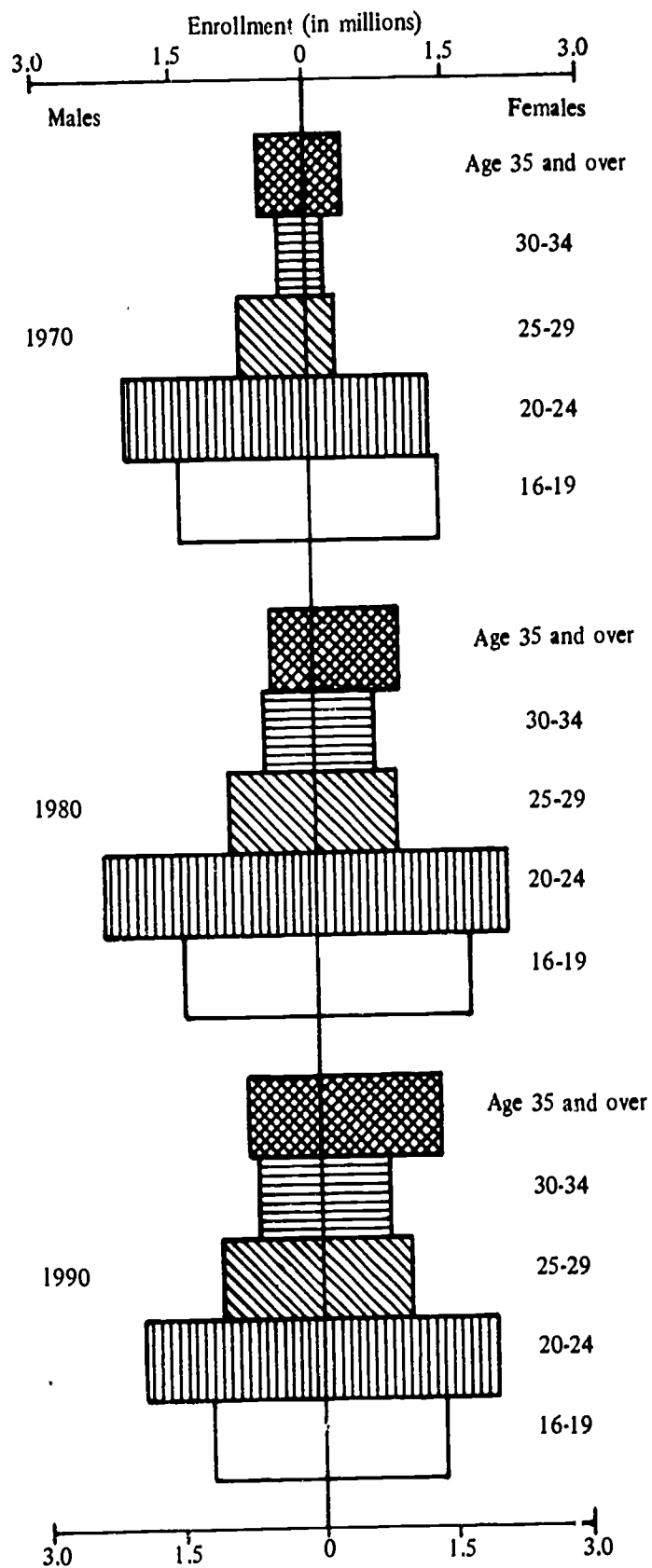


Figure 5.—Total enrollment in all institutions of higher education, by age and sex:  
50 States and D.C., 1970, 1980 and 1990



of the draft in the early 1970's and the continued impact of the women's equal rights movement during the 1970's, the enrollment rates for younger men and women became fairly comparable by the late 1970's.

Nonetheless, the major changes in the age distribution of college students are expected to occur among the older age groups (25 years old and over). By 1990, older students

are expected to constitute 47 percent of all college enrollment, compared with only 28 percent in 1970. And like most major changes that have occurred and are expected to occur in American education over the 1950 to 1990 period, the exceptional aging of the college population corresponds to the aging of the baby boom generation.

Table 2.—Annual number of births (U.S. Census projections, Series II): 50 States and D.C., 1940 to 1990  
(In thousands)

Year (July 1 — June 30)	Births	Year (July 1 — June 30)	Births
1940-41 .....	2,631	1966-67 .....	3,608
1941-42 .....	2,789	1967-68 .....	3,520
1942-43 .....	3,168	1968-69 .....	3,583
1943-44 .....	2,989	1969-70 .....	3,676
1944-45 .....	2,937	1970-71 .....	3,713
1945-46 .....	2,873	1971-72 .....	3,393
1946-47 .....	3,948	1972-73 .....	3,195
1947-48 .....	3,658	1973-74 .....	3,111
1948-49 .....	3,660	1974-75 .....	3,185
1949-50 .....	3,638	1975-76 .....	3,126
1950-51 .....	3,771	1976-77 .....	3,274
1951-52 .....	3,859	1977-78 .....	3,304
1952-53 .....	3,951	1978-79 .....	3,382
1953-54 .....	4,045	1979-80 .....	3,575
1954-55 .....	4,119	1980-81 .....	3,733
1955-56 .....	4,167		Projected
1956-57 .....	4,312	1981-82 .....	3,839
1957-58 .....	4,313	1982-83 .....	3,904
1958-59 .....	4,298	1983-84 .....	3,951
1959-60 .....	4,279	1984-85 .....	3,985
1960-61 .....	4,350	1985-86 .....	4,007
1961-62 .....	4,259	1986-87 .....	4,018
1962-63 .....	4,185	1987-88 .....	4,019
1963-64 .....	4,119	1988-89 .....	4,009
1964-65 .....	3,940	1989-90 .....	3,987
1965-66 .....	3,716	1990-91 .....	3,956

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Population Estimate and Projections," Series P-25.



Table 3.—School-age and college-age populations (U.S. Census projections, Series II): 50 States and D.C., 1960 to 1990  
(In thousands)

Year (July 1)	5-13 years old	14-17 years old	18-24 years old	25-34 years old	35-44 years old
1960 .....	32,965	11,219	16,128	22,919	24,221
1961 .....	33,217	12,052	17,004	22,692	24,392
1962 .....	33,897	12,759	17,688	22,494	24,519
1963 .....	34,578	13,500	18,268	22,410	24,584
1964 .....	35,244	14,274	18,783	22,396	24,562
1965 .....	35,754	14,153	20,293	22,465	24,447
1966 .....	36,283	14,405	21,376	22,725	24,276
1967 .....	36,629	14,735	22,327	23,156	24,038
1968 .....	36,805	15,173	22,883	23,990	23,731
1969 .....	36,837	15,560	23,724	24,681	23,384
1970 .....	36,636	15,911	24,687	25,293	23,142
1971 .....	36,104	16,281	25,779	25,841	22,970
1972 .....	35,457	16,556	25,913	27,403	22,853
1973 .....	34,737	16,747	26,397	28,609	22,803
1974 .....	34,072	16,881	26,915	29,776	22,817
1975 .....	33,439	16,933	27,603	30,918	22,815
1976 .....	32,954	16,896	28,165	32,045	23,076
1977 .....	32,225	16,791	28,623	33,162	23,539
1978 .....	31,383	16,649	28,981	33,948	24,380
1979 .....	30,641	16,273	29,299	35,009	25,090
1980 <sup>1</sup> .....	30,199	15,764	29,463	36,172	25,721
Projected					
1981 .....	29,803	15,219	29,513	37,462	26,269
1982 .....	29,544	14,656	29,356	37,861	27,831
1983 .....	29,335	14,308	29,022	38,540	29,048
1984 .....	29,175	14,261	28,480	39,204	30,236
1985 .....	29,098	14,392	27,852	39,859	31,376
1986 .....	29,475	14,294	27,084	40,445	32,512
1987 .....	30,142	13,964	26,445	40,861	33,579
1988 .....	30,944	13,480	25,967	41,118	34,377
1989 .....	31,715	12,997	25,630	41,222	35,429
1990 .....	32,568	12,771	25,148	41,086	36,592

<sup>1</sup> Projected

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Population Estimates and Projection," Series P-25.

## Chapter II

# ENROLLMENT

During the next decade, enrollment declines in elementary and secondary schools will end and a gradual increase will begin as the 5- to 17-year-old population begins to increase in 1985. The enrollment increase is expected to continue into the 1990's, resulting in an enrollment boom that may surpass the peak levels of 1970<sup>1</sup>. However, enrollment in institutions of higher education is expected to increase, first moderately and then becoming fairly stable, even though the traditional college-age population (18-24 years old) is projected to decline 15 percent over the decade.

As a result of this decline, the college enrollment of students under 25 years old is expected to decrease by 1.1 million over the decade. But the increased enrollment of older students (25 years old and over) is expected to offset the declines in the enrollment of younger students, resulting in a fairly stable college enrollment during the 1980's.

### All Levels

Total fall enrollment (independent nursery and kindergarten, elementary, secondary and higher education) decreased from 61.4 million in 1970 to 60.3 million in 1980 (table 4). This occurred as declining enrollments in elementary and secondary schools more than offset increases at the nursery and kindergarten and higher education levels (figure 6). During the 1980's, enrollments in elementary and secondary schools are expected to continue declining until 1984, when a gradual increase is expected to

begin. By 1990, enrollment in these schools is expected to be slightly higher than in 1980. Combining with fairly stable enrollments at the higher education level and continued increases at the nursery and kindergarten levels, total enrollment is expected to increase to 61.7 million by 1990. These totals do not include enrollments in noncollegiate postsecondary schools and adult basic and secondary education programs. In 1980, these enrollments were estimated to be 1.8 million<sup>2</sup> (figure 7) and 2.0 million<sup>3</sup> respectively.

### Enrollment in Nursery Schools and Kindergartens

From 1970 to 1980, enrollment in nursery schools and kindergartens increased by 21 percent, from 4.3 million to 5.2 million (table 5). This increase occurred despite the 14 percent decline of the 3- to 5-year-old population, which dropped from 10.7 million in 1970 to 9.2 million in 1980 (figure 8). This inverse relationship is not surprising, since data from the Bureau of Labor Statistics<sup>4</sup> show that the labor force participation rate of women has increased dramatically during the decade of the 1970's (figure 9) and the number of children under 6 whose mothers were in the

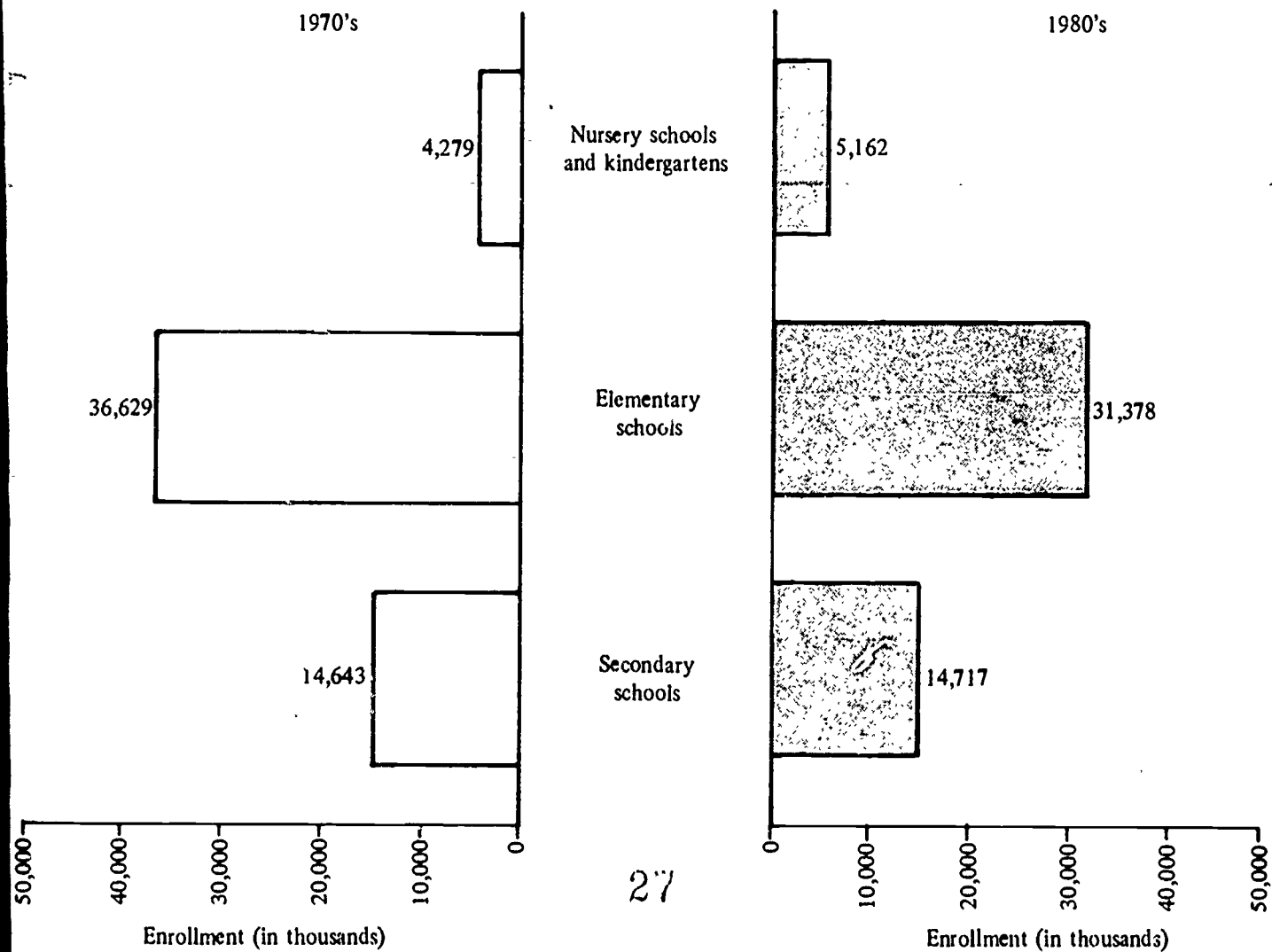
<sup>1</sup>Martin M. Frankel, U.S. Department of Education, *American Education*, "Projecting a School Enrollment Turnaround," Washington, D.C., August/September 1981.

<sup>2</sup>Arthur Podolsky, U.S. Department of Education, National Center for Education Statistics, Early Release, *Statistics of Postsecondary Schools with Occupational Programs*, 1980.

<sup>3</sup>Barbara A. Whalen, U.S. Department of Education, National Center for Education Statistics, Bulletin, *Women and Minority Groups Made up Largest Segment of Adult Basic and Secondary Education Programs*, August 1981.

<sup>4</sup>U.S. Department of Labor, Bureau of Labor Statistics, *Marital and Family Characteristics of the Labor Force*, March 1980, December 9, 1980.

Figure 6. Enrollment in regular elementary and secondary schools, by level. 50 States and D.C., 1970 and 1980



**Figure 7.—Enrollment in institutions of higher education, by level: 50 States and D.C., 1970 and 1980**

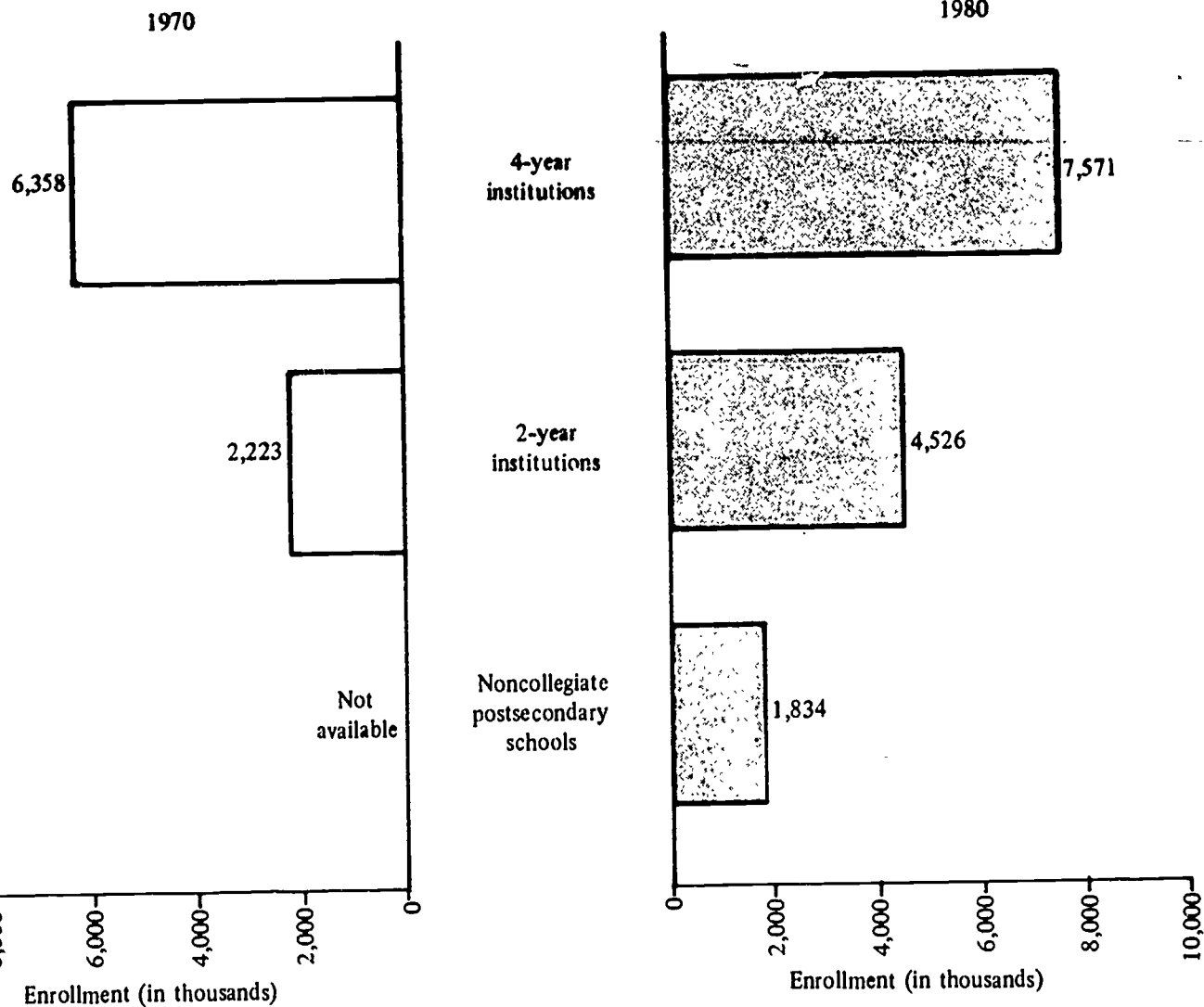
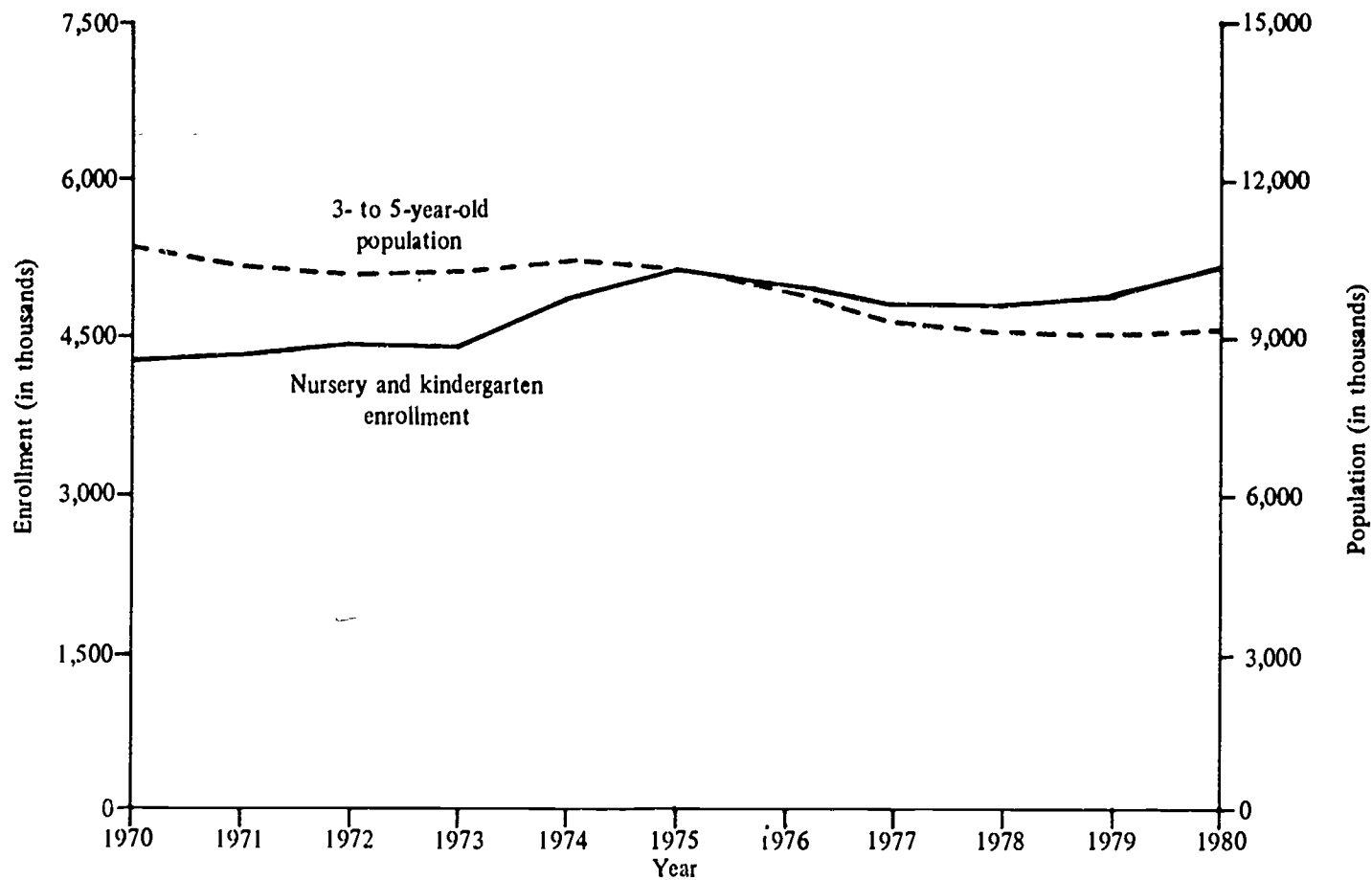


Figure 8.—Nursery and kindergarten enrollment and 3- to 5-year-old population, 1970 to 1980



labor force also has increased between 1970 and 1980. The table below shows the labor force participation rates of women, by age group, for 1970 and 1980.

Year	Age group			
	18-19	20-24	25-34	35-44
1970 .....	—	57.8	45.0	51.1
1980 .....	62.3	69.2	65.5	65.5

—Not available

And concurrent with the rise in labor force participation rates of women is the increase in the number of children under 6 whose mothers were in the labor force. This number increased by 34 percent, from 5.6 million in 1970 to 7.5 million in 1980. This increase reflects the rise in the number of broken marriages, the decline in the birth rate, and the continuing increase in the labor activity of mothers with young children. Here, both the economic necessity of women having to work and society's acceptance of young mothers working outside the home have contributed to the rising levels of preprimary enrollment and will continue to

affect these levels in the future. Therefore, in the 1980's, enrollment in nursery schools and kindergartens is expected to increase from 5.2 million in 1980 to 6.9 million in 1990 (figure 10). Over the projection period, most of the increases are expected in private-nursery schools for 3- and 4-year-olds, while for 5-year-olds most of the increases will be in kindergartens of regular public schools (figure 11).

Since many women have postponed childbearing because of occupational and educational pursuits, they may decide to have a baby later in the decade. The Bureau of the Census reported that women in their late twenties and early thirties are increasingly more inclined to have a baby than they have been in recent years. The study also said that 13 percent of women ages 30 to 34 are still childless<sup>5</sup>. Thus, the potential for growth in pre-primary enrollment is inherent in both labor and demographic forces.

The low alternative projection assumes that enrollment rates will grow for each age, but not as rapidly as the intermediate alternative projection. Under the low assumption, enrollment in nursery schools and kindergarten is ex-

<sup>5</sup>U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Population Profile of the United States, 1980," Series P-20, No. 363, June 1981.

Figure 9.—Labor force participation rate of women, by age group: March 1970-80

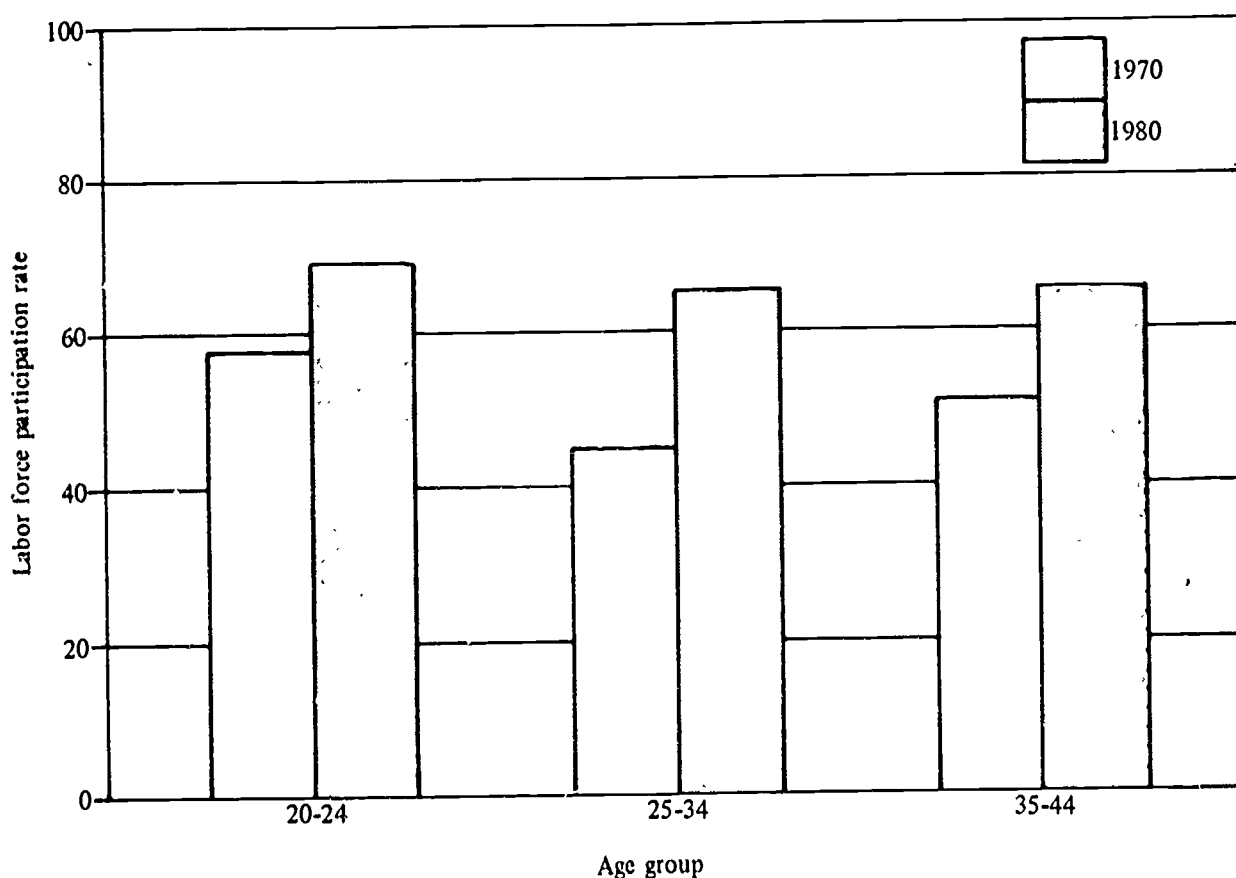
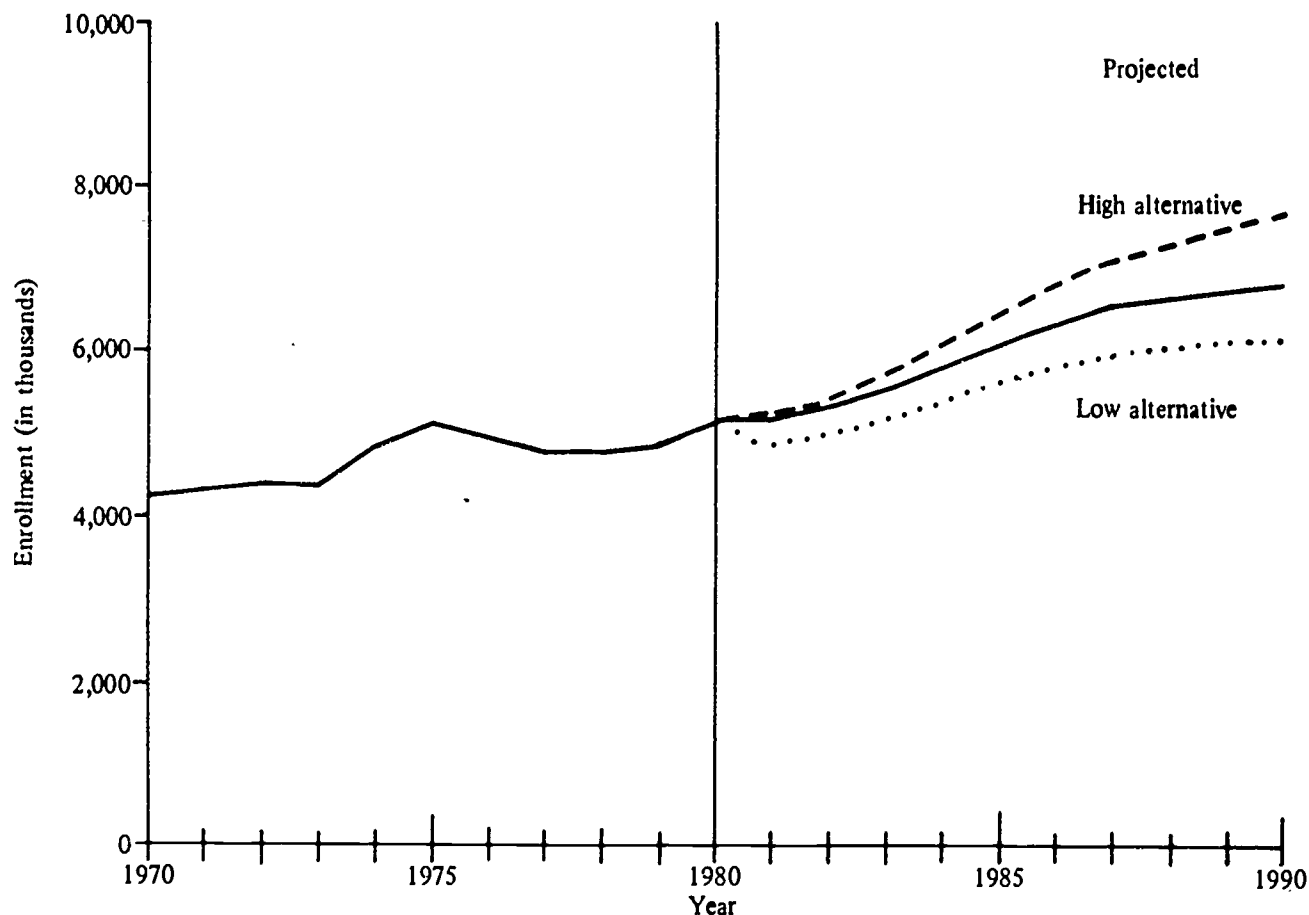


Figure 10.—Nursery and kindergarten enrollment, with alternative projections: 50 States and D.C., fall 1970 to 1990



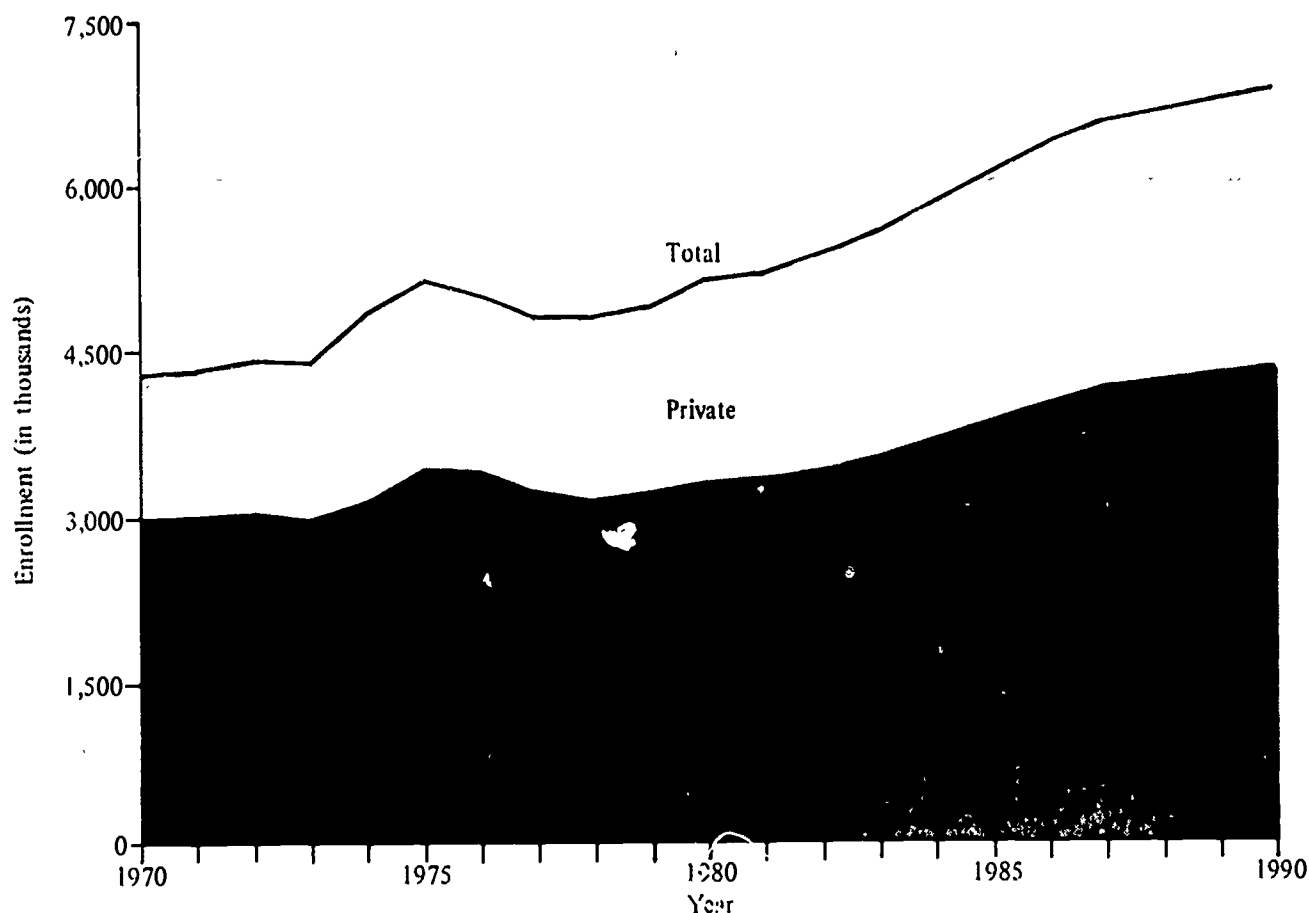
pected to increase from 5.2 million in 1980 to 6.2 million in 1990, 700,000 lower than the intermediate alternative projection.

The high alternative projection assumes that age-specific enrollment rates will increase even faster than the intermediate alternative projections throughout the projection period. Under the high assumption, nursery and kindergarten enrollment will increase to 7.7 million in 1990, an increase of 800,000 over the intermediate alternative projection. The major increases occur for 3- and 4-year-olds under this alternative, since enrollment of 5-year-olds is already approaching 100 percent. With the large potential for growth in enrollment rates of 3- and 4-year-olds, nursery and kindergarten enrollment could also reach this high level.

## Regular Elementary and Secondary Schools

The enrollment rates for most of the school-age population (5- to 17-year-olds) are all close to 100 percent. And since school is compulsory to age 16 in most States, elementary enrollment closely reflects the 5- to 13-year-old population, and secondary enrollment tends to reflect the 14- to 17-year-old population. Enrollment in regular elementary and secondary schools decreased continuously from 51.3 million in 1971, its peak year, to 46.1 million in 1980 (tables 6 and 7). These enrollments are expected to continue decreasing until they reach a low point of 44.0 million in 1984. Then, as the 5- to 17-year-old population begins to increase, enrollment will also rise, gradually, to 46.7 million in 1990 (figure 12).

Figure 11.—Nursery and kindergarten enrollment, with intermediate alternative projections, by control:  
50 States and D.C., fall 1970 to 1990



Enrollment in regular public elementary and secondary schools decreased from 45.9 million in 1970 to 41.0 million in 1980. Enrollments in these schools are expected to continue declining, reaching 39.0 million in 1984, before increasing to 41.3 million in 1990. For public enrollment, the retention rates for grades 2-10 are close to 100 percent. The retention rates for grades 11 and 12 are about 90 percent, which allows for increased retention that would result in increased enrollment at the secondary level. This prospect is not likely, since the rates have not changed in the past 10 years.

During the 1970's, Catholic enrollment decreased from 3.4 million to 2.3 million, a drop of 1.1 million. Much of this large decrease was offset by enrollment increases in other private schools. As a result, enrollment in private schools only decreased from 5.4 million in 1970 to 5.1 million in 1980. Private enrollment is expected to be fairly stable at 5.0 million through 1985. Beginning in 1986, enrollment in private schools is expected to increase to 5.4 million by 1990 as the 5- to 17-year-old population begins to increase. At that time, private school enrollment is projected to account for 11.6 percent of the total enrollment in

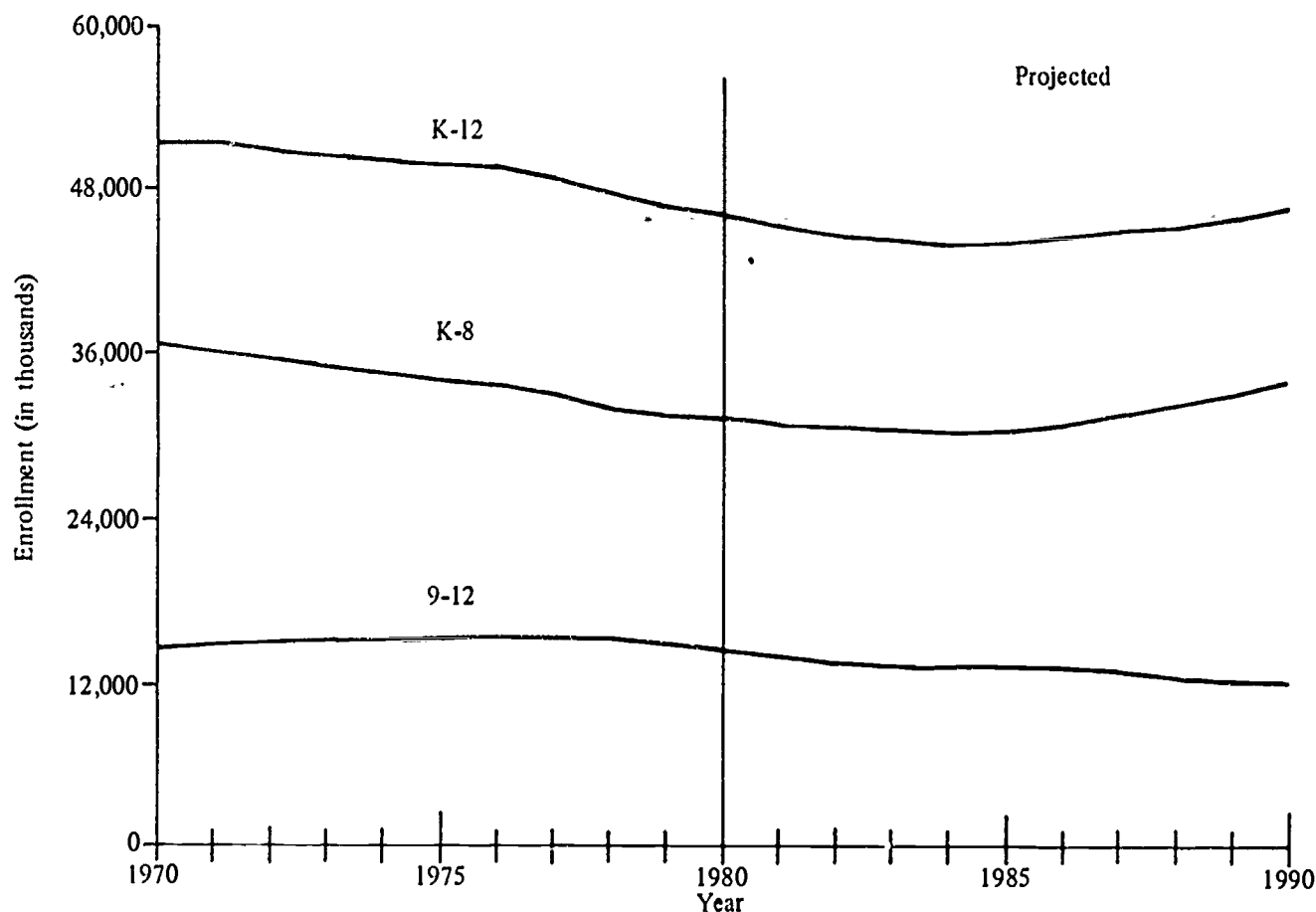
elementary and secondary schools compared with 11.1 percent in 1980 and 10.5 percent in 1970. Thus, private schools have increased slightly their share of the Nation's school children in the 1970's and are expected to slightly increase their share in the 1980's. However, currently it appears that the public schools will continue to bear the responsibility of educating the great majority of the Nation's children.

## Grade Group

Enrollment in grades K-8 of public and private schools decreased from 36.6 million in 1970 to 31.4 million in 1980 (table 6). This decline is expected to continue, reaching 30.5 million by 1984. As the offspring of the baby-boom generation begin school in the mid 1980's, this number will climb to 34.2 million by 1990. In contrast, enrollment in grades 9-12 increased from 14.6 million in 1970 to 15.7 million in 1976. Thereafter, these enrollments declined to 14.7 million in 1980, signifying the move of low-birth



Figure 12. Enrollment in grades K-12 of regular day schools, with projections: 50 States and D.C., fall 1970 to 1990



cohorts from grades K 8 to grades 9-12. Paralleling the decline in the 14- to 17-year-old population, 9-12 enrollments are projected to decrease throughout the projection period to 12.4 million by 1990.

## Institutions of Higher Education

During the next decade, the traditional college-age population is expected to decrease by 15 percent. But instead of declining, enrollment levels in colleges and universities are expected to remain at or above the 1980 enrollment level of 12.1 million. This apparent anomaly is primarily a result of two factors. First, projections for the

early 1980's are based on the assumption that poor employment prospects will cause an increased proportion of younger students to enroll full-time. Second, in the mid- and late-1980's, the increased enrollment of older students is expected to offset declines in the enrollment of younger students when job prospects for the latter improve.

In the first half of the 1970's, enrollment levels in higher education rose as the large birth cohorts of the 1950's entered college. Also, the enrollment of younger students increased during the 1974-75 recession period. During this time, unemployment rates for young adults age 16 to 19 and 20 to 24 were 20.0 percent and 13.6 percent respectively. These were the highest rates recorded during the

decade of the 1970's, as depicted in the table below and shown in figure 13. These record unemployment rates coincide with higher-than-average increases in college enrollment during the 1970's.

Unemployment rates for young adults 16 to 19 and 20 to 24 years old

Year	Age group	
	16 to 19	20 to 24
1970 .....	15.3	8.2
1971 .....	16.9	10.0
1972 .....	16.3	9.3
1973 .....	14.5	7.8
1974 .....	16.0	9.1
1975 .....	20.0	13.6
1976 .....	19.0	12.0
1977 .....	17.7	10.9
1978 .....	16.3	9.5
1979 .....	16.1	9.0
1980 .....	17.8	11.5

SOURCE: Council of Economic Advisers, *Economic Indicators*.

In fact, college enrollment increased from 9.6 million in 1973 to 11.2 million in 1975 (table 9). At the end of the 1974-75 recession, college enrollment dropped to 11.0 million in 1976 as slight decreases in enrollment rates were experienced for younger students.

In the late 1970's, older students, primarily women and part-time, began to enroll in increasing numbers. As a result, college enrollment increased to 11.6 million in 1979. In 1980, enrollment increased to an all-time high of 12.1 million (figure 14), as enrollment rates for younger students once again increased during a period of high unemployment. Unemployment rates for young adults had declined from 1975 to 1979, but they rose again in 1980 as the Nation once more experienced a period of high unemployment. Already, there are indications that unemployment rates for young adults are continuing to rise in 1981.

If high unemployment rates continue, college enrollment is expected to increase to 12.6 million in 1982, rather than decrease in response to declines in the traditional college-age population (figure 15). Based on the assumption that the economy will improve in the mid 1980's, enrollment rates of younger students are expected to fall back to 1980 levels. College enrollment is expected to decrease to 12.2 million in 1985 and then remain fairly

Figure 13.—Unemployment rate, by age group: 1970 to 1980

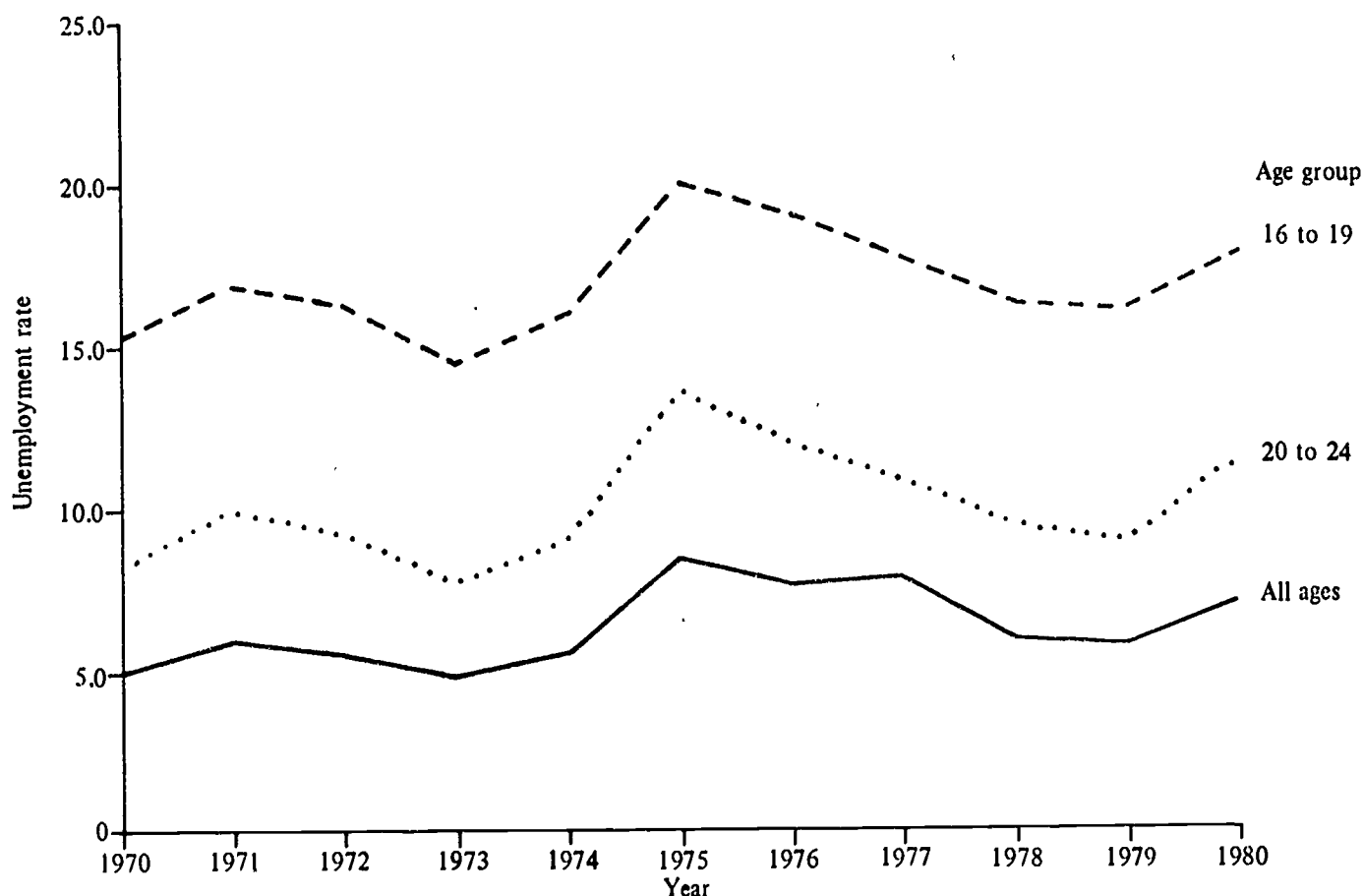
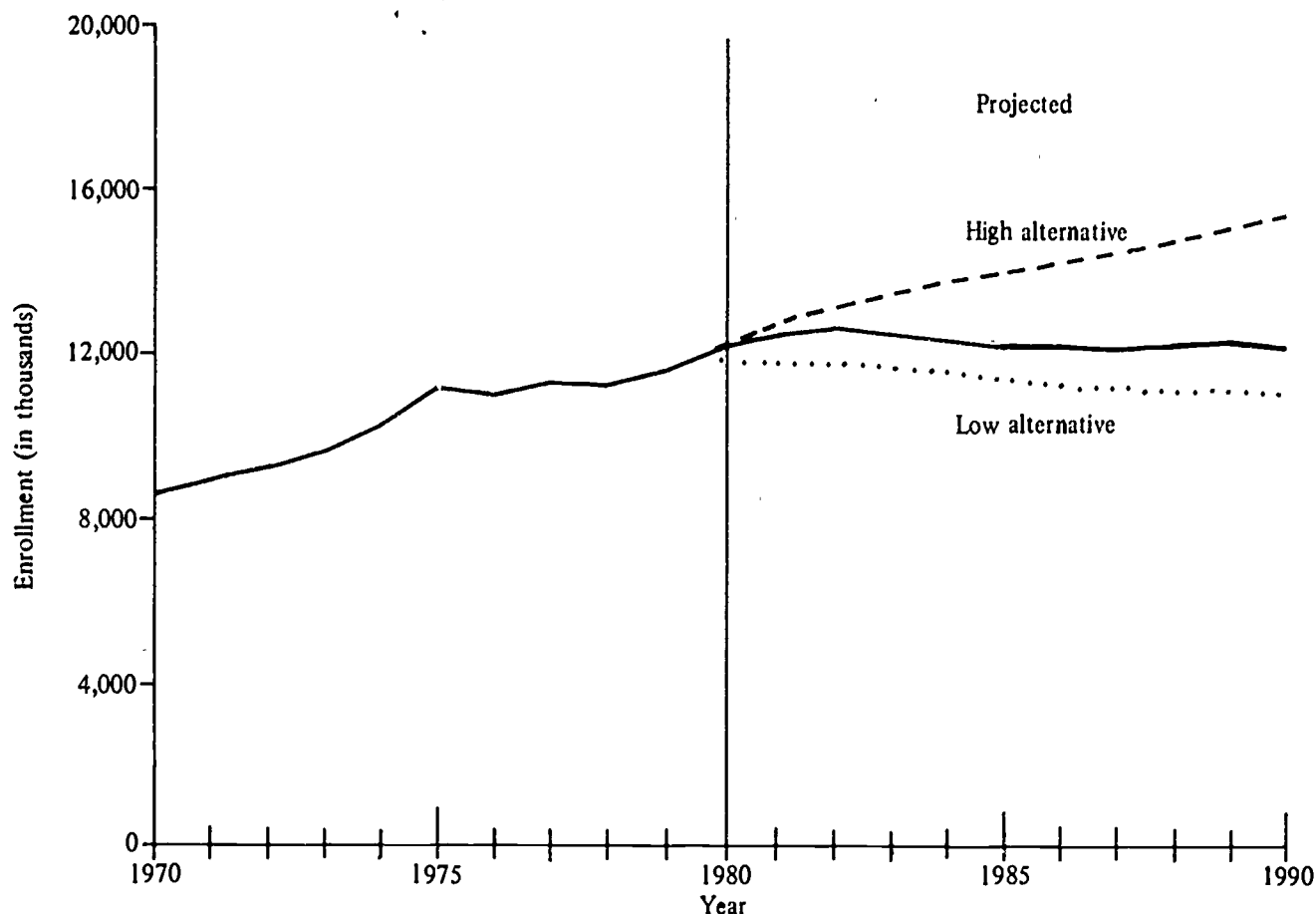


Figure 14.—Total enrollment in institutions of higher education, with alternative projections.  
50 States and D.C., fall 1970 and 1990



stable at 12.1 million for the remainder of the projection period. These high enrollment levels are expected to be maintained during the late 1980's as the increased enrollment of older students offset the enrollment declines of younger students.

In contrast, base-line alternative projections of college enrollment are shown in appendix B. These projections are based on the assumption that age-specific enrollment rates will remain at 1980 levels throughout the projection period, with the exception of older women, whose rates were projected to increase slightly. These base-line projections may prove more accurate if unemployment rates for younger people improve markedly in the short run.

However, neither the intermediate nor the base-line enrollment levels for the 1980's may be realized as new guidelines restrict the availability of Federal financial aid. Students from families with middle incomes who have relied on this aid to pay college costs may lose their eligibility. This may have an adverse affect on enrollments. Consequently, enrollments could turn out to be lower than the intermediate and base-line projections shown in tables 9 and A-1.

## Enrollment by Age

The alternative projections of college enrollments by age, sex, and attendance status are shown in tables 8A, 8B, and 8C. Table 8A shows intermediate alternative projections, most of which are discussed in the following sections of this chapter. Table 8B shows low alternative projections and table 8C shows high alternative projections. These alternative projections depend to a great extent on the different assumptions made about the future enrollment rates of men and women for 9 single years and 3 age groups by attendance status.

The intermediate alternative projection assumes that age-specific enrollment rates of younger people will increase slightly to 1982 in response to high unemployment rates and then drop back to the 1980 levels as the economy improves. Other age-specific enrollment rates are expected to remain constant throughout the decade, with the exception of enrollment rates of older women, which will increase slightly. Under the intermediate assumption, the period from 1970 to 1990 will be one of unprecedented

changes in the characteristics of college students. The intermediate projections show that between 1970 and 1990, younger students, less than 25 years old, will decrease from 72 percent of all students to 53 percent. Men who comprised 59 percent of the students in 1970 are expected to fall to 48 percent in 1990. Full-time enrollment, which was 68 percent in 1970, is expected to decrease to 54 percent in 1990.

During the 1970's, the 18- to 24-year-old population increased by 20 percent. At the same time, the number of college students less than 25 years old increased by 22 percent, from 6.2 million in 1970 to 7.6 million in 1980. Also, the enrollment of students 25 years and over increased from 2.4 million to 4.5 million as the enrollment rates for this group increased during the late 1970's (figures 16 and 17).

In the 1980's, the traditional college-age population is expected to decrease by 15 percent. At the same time, the enrollment of students less than 25 years old is projected to decrease, also by 15 percent, a decline of 1.1 million over the decade. However, this decrease is projected to be offset by a 1.1 million increase in the enrollment of older students during that period. By 1990, older students are expected to

account for 47 percent of the 12.1 million students enrolled compared with 38 percent in 1980.

Since older students are more likely to enroll on a part-time basis than younger students, increases in part-time enrollment have paralleled increases in older students through 1980 and are expected to continue to do so in the 1980's (figure 18). Part-time enrollment accounted for 32 percent of all college enrollment in 1970, 41 percent in 1980, and is expected to reach 46 percent in 1990.

In addition to older and part-time students, women have played a major role in the 3.5 million enrollment increase of the 1970's. Of that number, 76 percent was accounted for by the increased enrollment of women — 45 percent due to older women and 36 percent due to older women enrolled on a part-time basis. As a result, women made up 51 percent of all college enrollment in 1980 compared with only 41 percent in 1970. Women are expected to increase their majority only slightly during the 1980's, reaching 52 percent in 1990 (figure 19).

The low alternative projections are based primarily on the assumptions that age-specific enrollment rates will either remain constant or decline throughout the projection period. This alternative shows a decrease from 12.1

Figure 15.—Total enrollment in institutions of higher education, with base-line and intermediate alternative projections: 50 States and D.C., fall 1970 to 1990

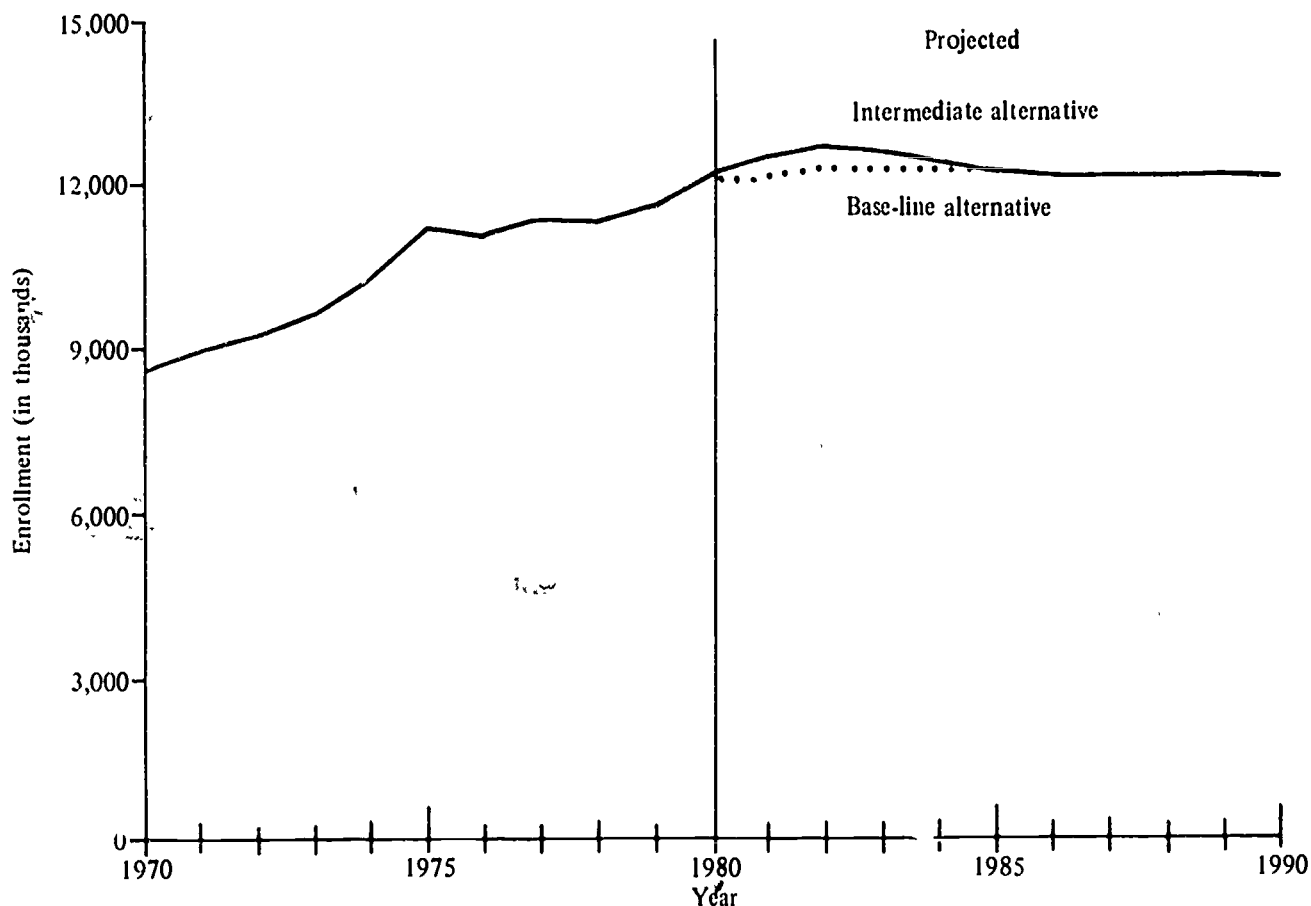
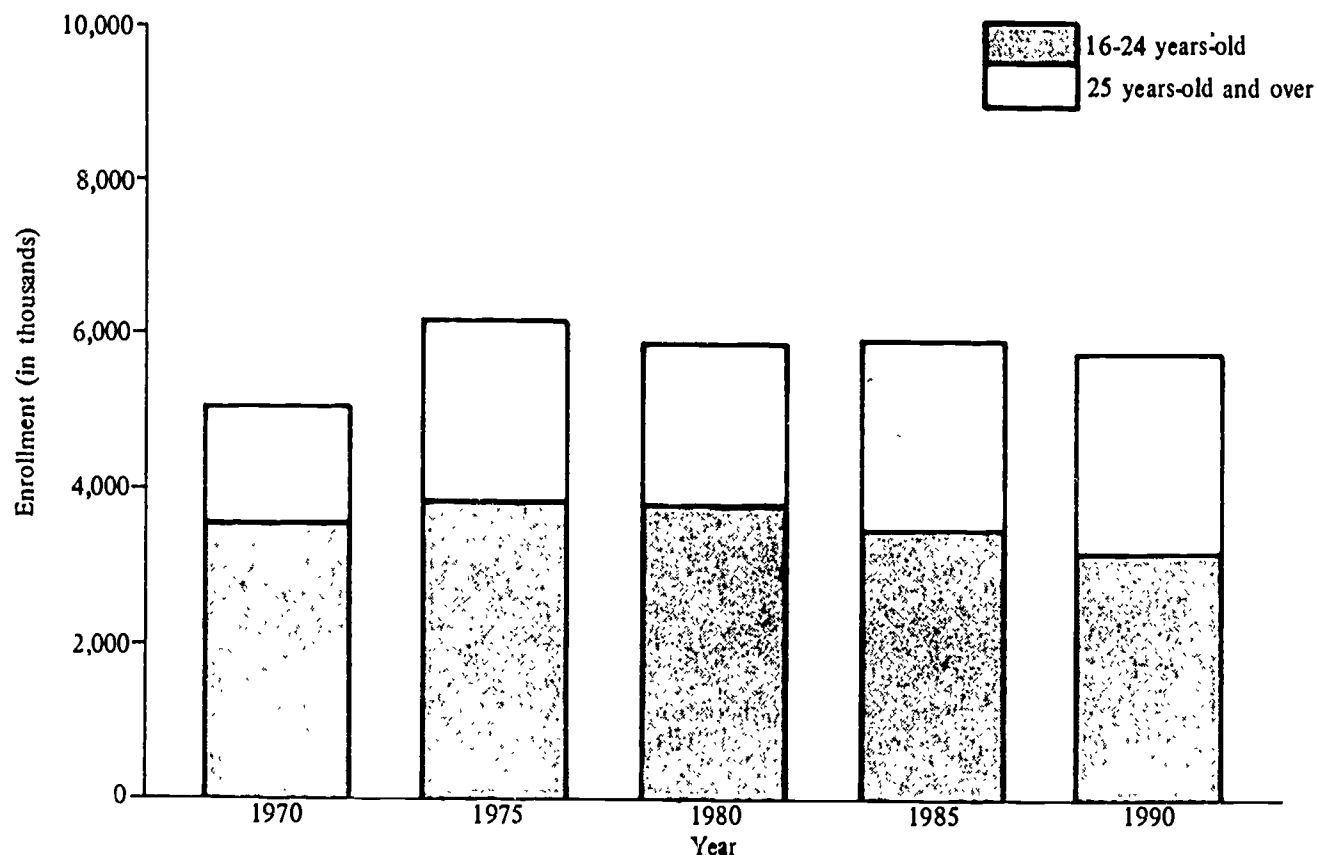


Figure 16.--Total enrollment of men in institutions of higher education, by age: 50 States and D.C., fall 1970, 1975, 1980, 1985, and 1990



million in 1980 to 11.1 million in 1990. Men and full-time students are expected to account for most of this decrease. Under this alternative, the enrollment of men is expected to decrease from 5.9 million in 1980 to 5.2 million in 1990, and full-time enrollment is expected to drop from 7.1 million to 5.8 million.

The high alternative projections assume that age-specific enrollment rates by attendance status will increase throughout the projection period. Under this alternative, college enrollment is expected to increase from 12.1 million in 1980 to 15.4 million in 1990, with full-time enrollment increasing from 7.1 million to 7.8 million and part-time enrollment increasing from 5.0 million to 7.6 million.

The high and low alternative projections are shown, along with the intermediate alternative, to indicate the uncertain behavior of future trends in enrollment rates of men and women. Even within the last decade, enrollment rates for men have fallen in the late 1970's and then climbed back to levels obtained in the early 1970's. Enrollment rates for women, which have lagged behind male enrollment rates, have now nearly reached parity with men. For both sexes, enrollment rates in the older age groups have increased significantly. Such diverse behavior could be appropriately represented by any of the alternative projections over the next decade.

## Enrollment by Type of Institution

The projections of enrollment in 4-year and 2-year colleges are based on the assumptions that the number of older students will increase, partially offsetting the expected decline in traditional college-age students, and that increasing proportions of these older students will be part-time. And since many 2-year institutions are community colleges that have traditionally served the needs of older students, it is not unrealistic to assume that increases will occur primarily in 2-year institutions and that decreases are more likely to occur in 4-year institutions which have traditionally depended on students 18 to 24 years old.

As table 9A shows, total enrollment in 4-year institutions increased from 6.4 million in 1970 to 7.6 million in 1980. Then, the number is expected to increase to 7.8 million in 1982 before declining to 7.1 million 1990 (figure 20). In contrast, table 9B shows that total enrollment in 2-year institutions increased from 2.2 million in 1970 to 4.5 million in 1980 and then is expected to continue to increase to 5.0 million in 1990. Nearly all of this growth is expected to be due to the increase in part-time enrollment. Part-time enrollment in 2-year institutions increased from 1.1 million

in 1970 to 2.8 million in 1980 and then is expected to continue to increase, reaching 3.2 million by 1990. And although full-time enrollment in 2-year institutions increased from 1.2 million in 1970 to 1.8 million in 1980, this number, after slight increases in the early 1980's, is expected to decrease to 1.8 million in 1990, its 1980 level.

## Enrollment by Control of Institution

Enrollment in private institutions is expected to decrease from 2.6 million in 1980 to 2.5 million in 1990. Enrollment in public institutions is expected to increase from 9.5 million in 1980 to 9.6 million in 1990 (figure 21). Public enrollment in 4-year institutions is expected to decline from 5.1 million in 1980 to 4.8 million in 1990, while public enrollment in 2-year institutions is expected to rise from 4.3 million in 1980 to 4.8 million in 1990. Private enrollment in 4-year institutions is expected to decrease between 1980 and 1990, from 2.4 million to 2.3 million, while private enrollment in 2-year institutions is also expected to drop between 1980 and 1990 from 198,000 to 192,000.

## Full-Time-Equivalent Enrollment

Full-time-equivalent enrollment increased from 6.7 million in 1970 to 8.8 million in 1980 and is expected to increase to 9.2 million in 1982 before decreasing to 8.4 million in 1990 (table 14 and figure 22). In the 1980's, the expected enrollment declines of the traditional college-age population are foreseen to be offset by increases in older students. But, these students will be primarily enrolled part-time. However, when these part-time enrollments are converted to full-time equivalents, they will not be large enough to compensate completely for the declines in full-time enrollment.

Total enrollment is expected to increase only 4,000 from 1980 to 1990 (table 9). At the same time, table 14 shows a decrease in full-time-equivalent enrollment of 321,000. Table 14 also shows that the decrease in full-time equivalent of undergraduate enrollment in 4-year institutions is 620,000 from 1980 to 1990, nearly 50 percent larger than the total drop in full-time-equivalent enrollment. In contrast, full-time-equivalent of undergraduate enrollment

Figure 17.—Total enrollment of women in institutions of higher education, by age. 50 States and D.C., fall 1970, 1975, 1980, 1985, and 1990

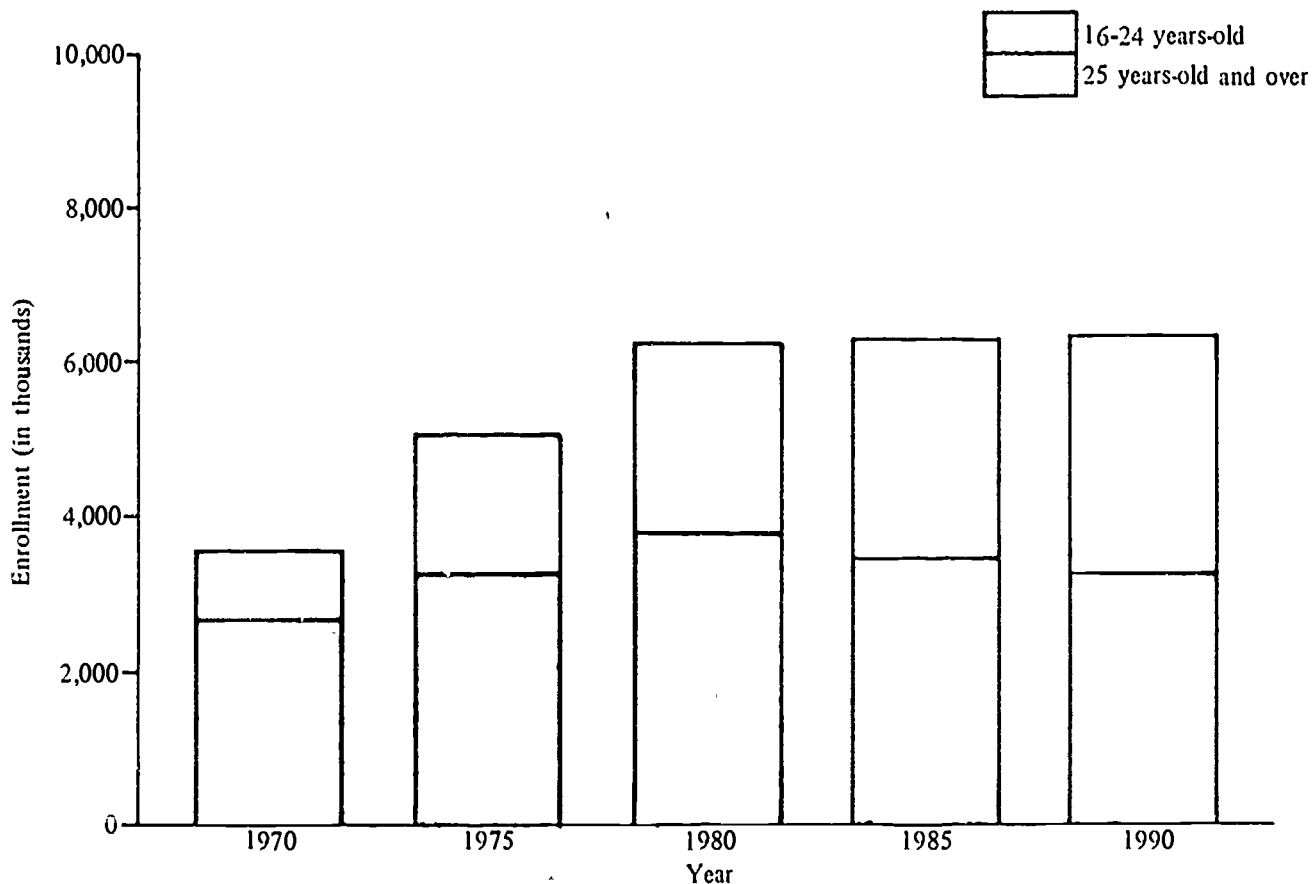
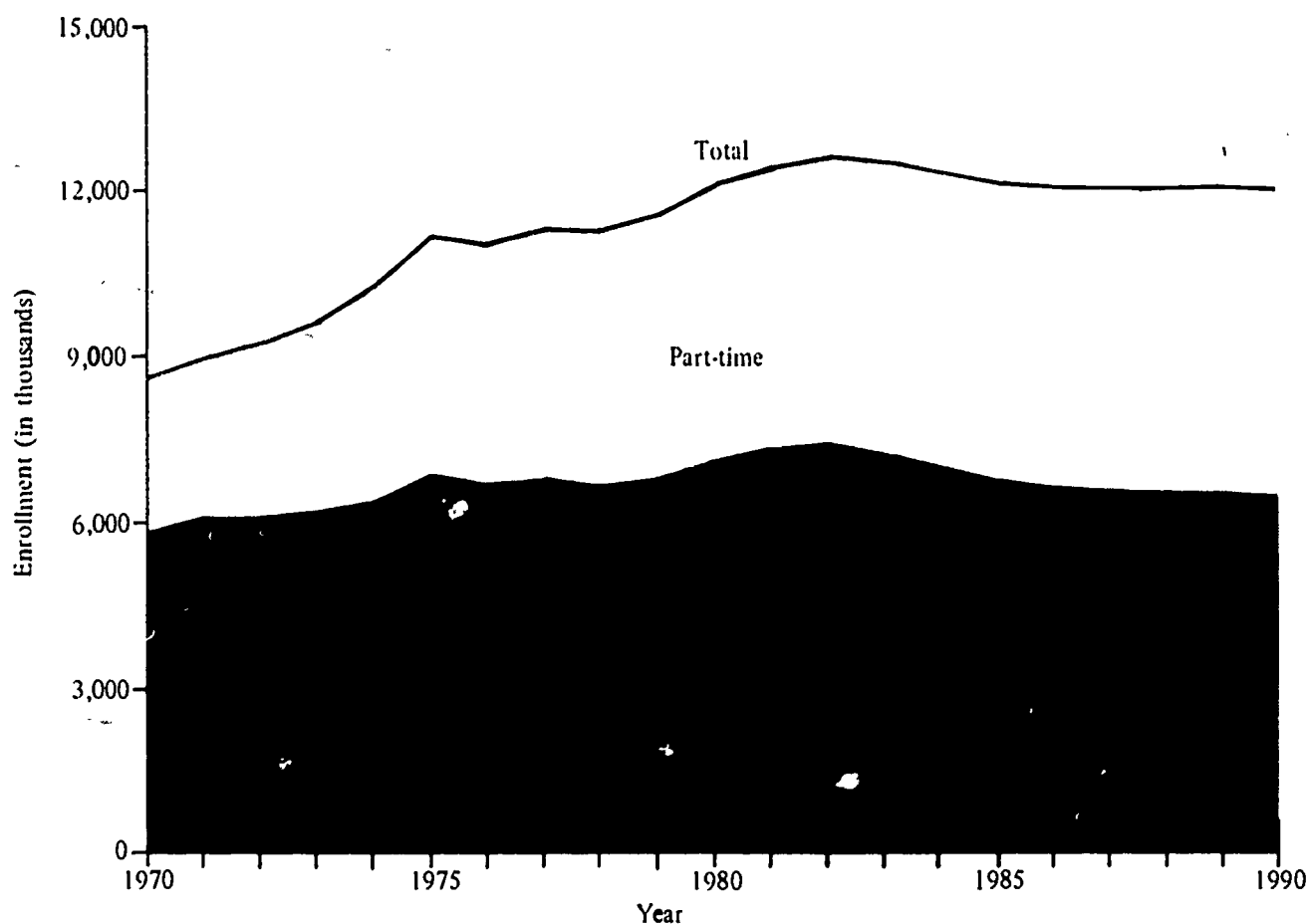


Figure 18. Total enrollment in institutions of higher education, with intermediate alternative projections, by attendance status: 50 States and D.C., fall 1970 to 1990



in 2-year institutions is expected to increase by 193,000. In addition, full-time-equivalent of postbaccalaureate enrollment in 4-year institutions is expected to rise by 107,000.

## Postbaccalaureate Enrollment

Graduate and first-professional enrollments are expected to grow over the projection period (figure 23). Graduate enrollment increased from 1.0 million in 1970 to 1.3 million in 1980. This figure is expected to rise even more, to 1.4 million in 1990 (table 12). First-professional enrollment climbed from 175,000 in 1970 to 278,000 in 1980 and is expected to increase to 330,000 in 1990.

Most of the increases in graduate enrollment are expected to be accounted for by women enrolled part-time. The number of women enrolled part-time is expected to increase from 466,000 in 1980 to 490,000 in 1990. And while

the number of women enrolled full-time is also expected to rise from 204,000 to 238,000, the number of men enrolled full-time is expected to decrease from 281,000 to 276,000.

Women have already made great strides in enrollment at the first-professional level, and their numbers are expected to continue increasing, from 79,000 in 1980 to 117,000 in 1990. The number of men also is expected to increase during this period, from 199,000 to 213,000.

These enrollment projections are moderately higher than the postbaccalaureate projections shown in the previous edition of this publication. This is because these new projections are greatly influenced by the projected enrollment increases of older students. Therefore, the increases projected for postbaccalaureate enrollment may not be realized if the enrollment of older students does not increase as rapidly as shown in table 8A.

Figure 19.—Total enrollment in institutions of higher education, with intermediate alternative projections, by sex of student: 50 States and D.C., fall 1970 to 1990

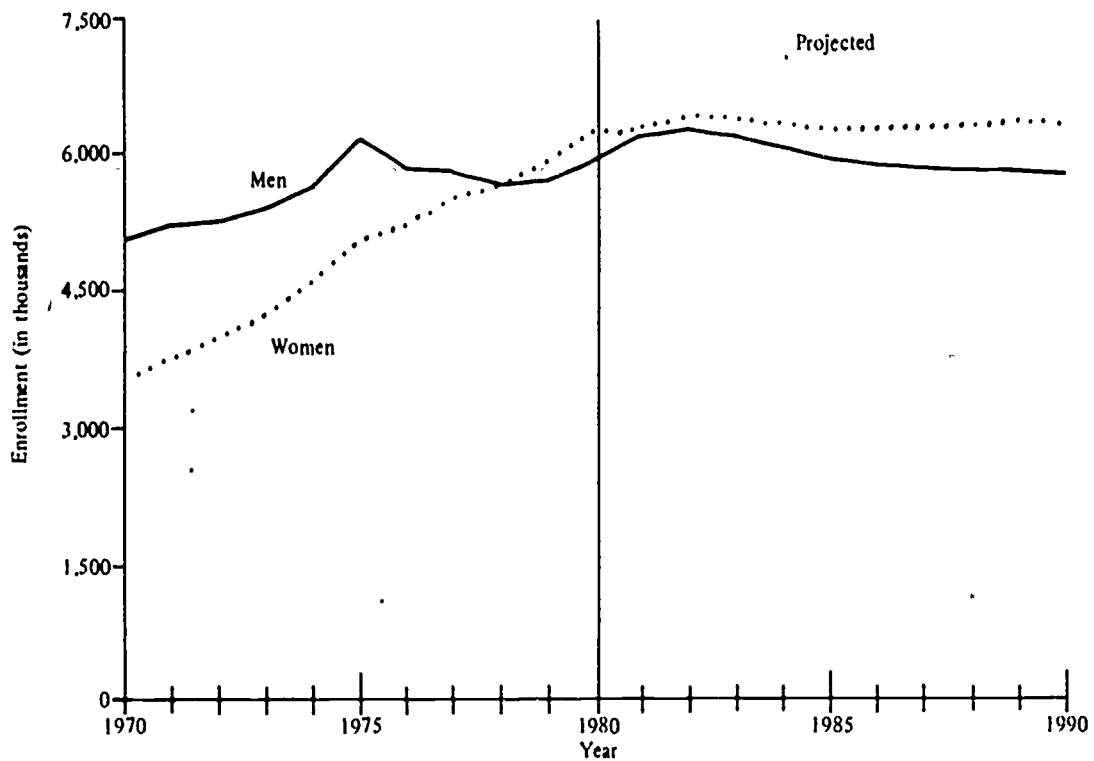


Figure 20.—Total enrollment in institutions of higher education, with intermediate alternative projections, by type of institutions: 50 States and D.C., fall 1970 to 1990

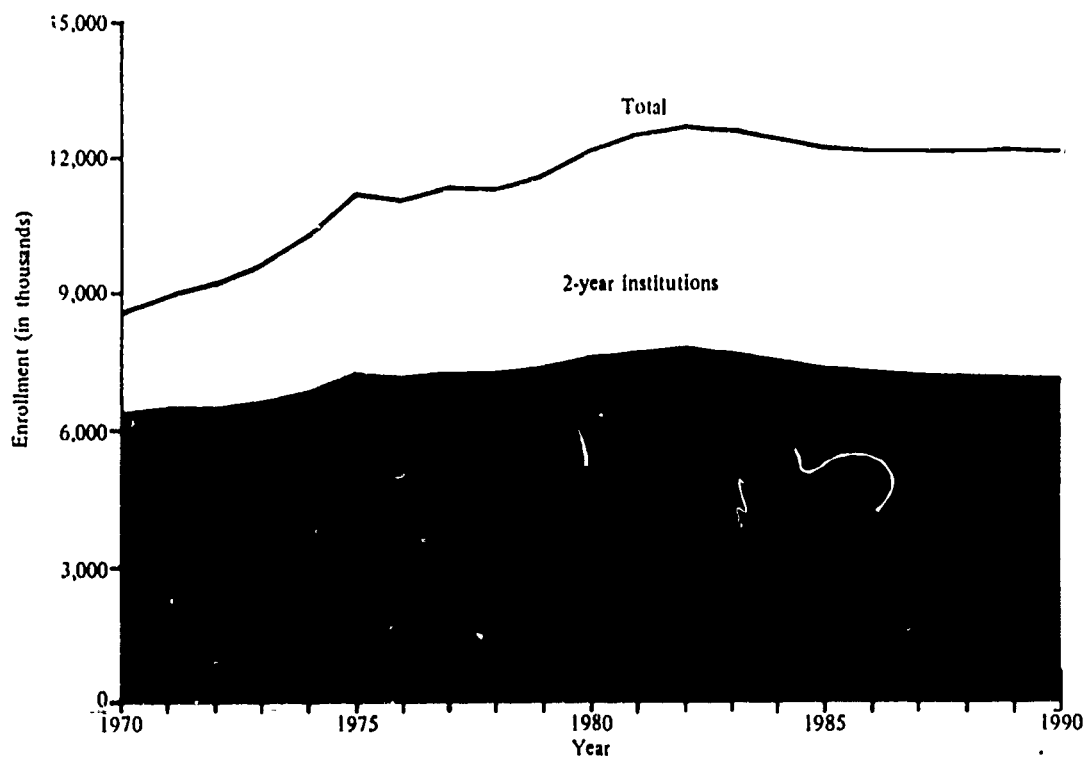




Figure 21.—Total enrollment in institutions of higher education, with intermediate alternative projections, by control of institution: 50 States and D.C., fall 1970 to 1990

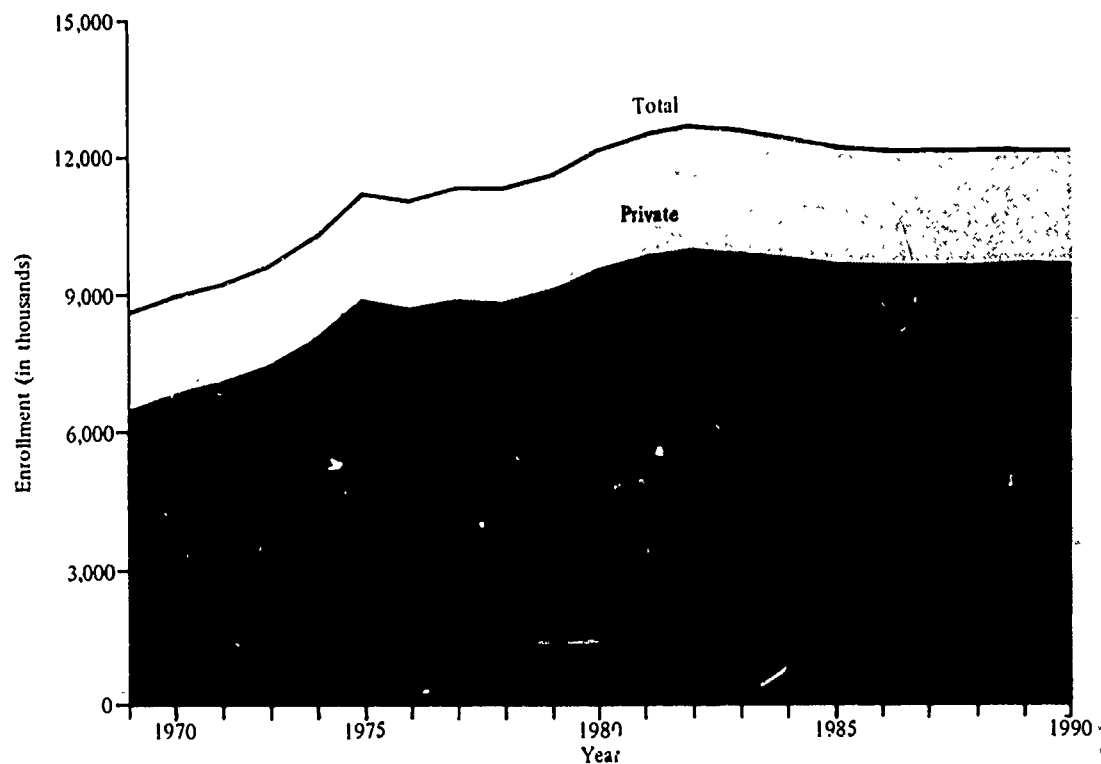


Figure 22.—Full-time-equivalent enrollment in institutions of higher education, with alternative projections: 50 States and D.C., fall 1970 to 1990

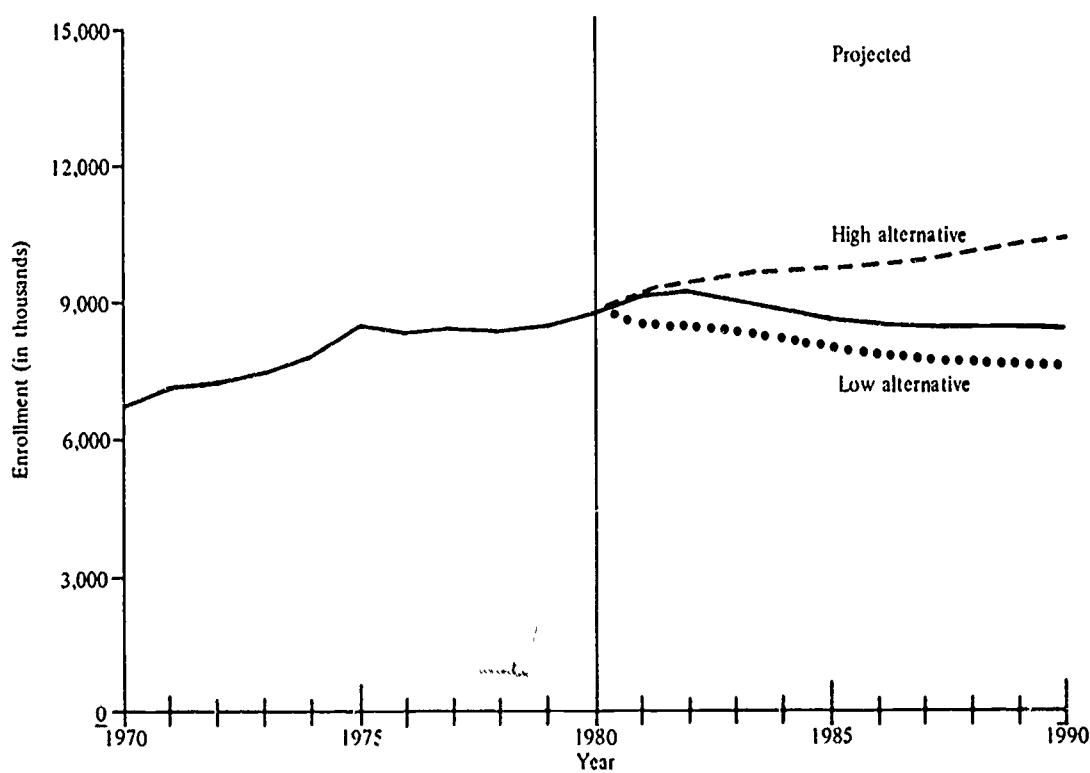


Figure 23.—Total enrollment in institutions of higher education, with intermediate alternative projections, by level enrolled: Fall 1970 to 1990

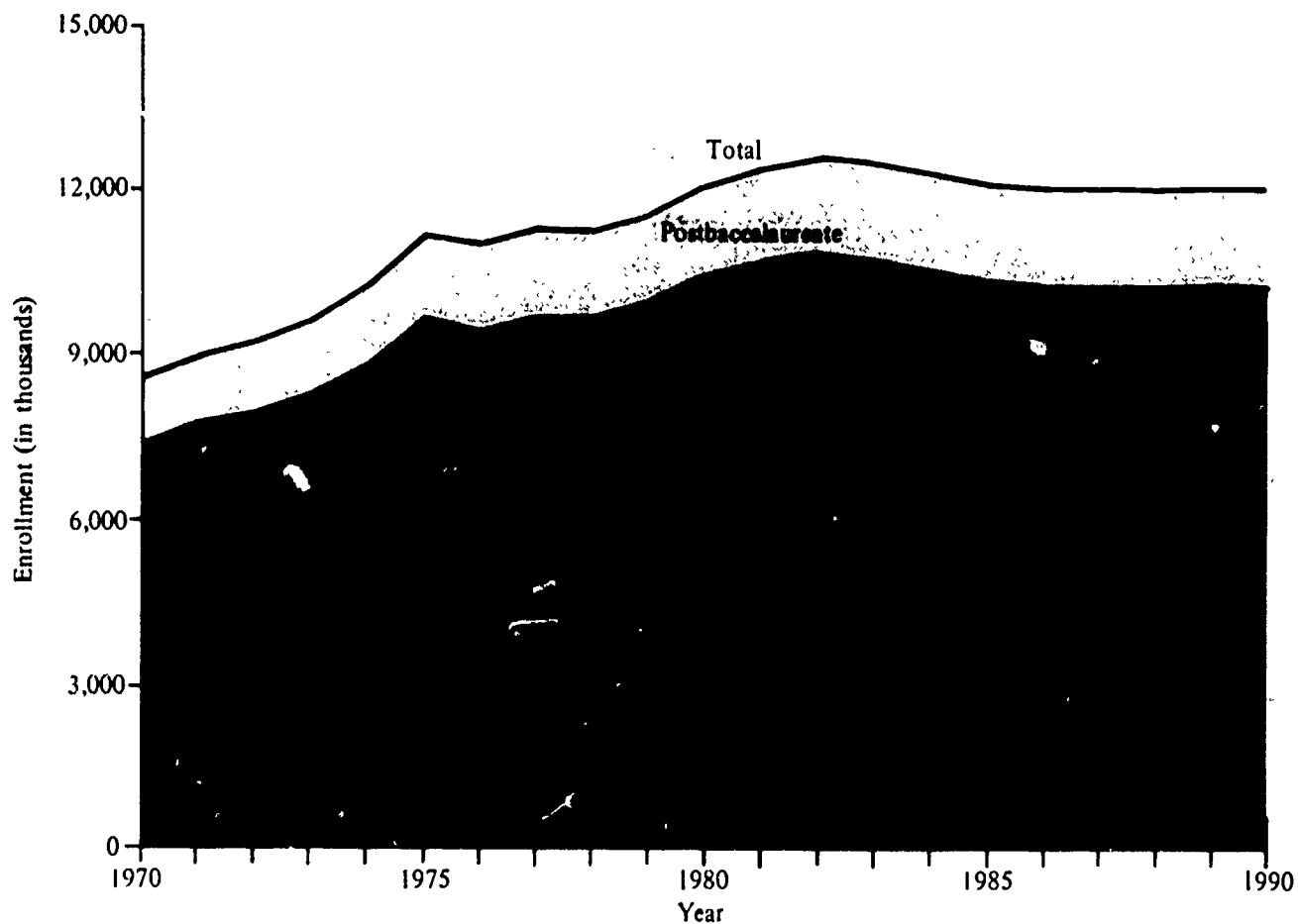


Table 4.—Summary of enrollment in educational institutions, with alternative projections, by level and control of institution:  
50 States and D.C., 1970-1990<sup>1</sup>

(In thousands)

Year (fall)	Total enrollment			Institutions of higher education		Regular elementary and secondary school				Independent nursery schools and kindergartens	
						Grades K-8		Grades 9-12			
	Total	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
1970 .....	61,380	52,758	8,622	6,428	2,153	32,577	4,052	13,332	1,311	421	1,016
1971 .....	61,863	53,409	8,454	6,804	2,144	32,265	3,900	13,816	1,300	524	1,110
1972 .....	61,650	53,364	8,286	7,071	2,144	31,831	3,700	13,913	1,300	549	1,142
1973 .....	61,531	53,193	8,338	7,420	2,183	31,353	3,700	14,077	1,300	343	1,155
1974 .....	62,014	53,407	8,607	7,989	2,235	30,921	3,700	14,132	1,300	365	1,372
1975 .....	62,813	54,106	8,707	8,835	2,350	30,487	3,700	14,304	1,300	480	1,357
1976 .....	62,226	53,469	8,757	8,653	2,359	30,006	3,825	14,311	1,342	499	1,231
1977 .....	61,664	52,860	8,805	8,847	2,437	29,336	3,797	14,240	1,343	437	1,228
1978 .....	60,673	51,836	8,837	8,784	2,475	28,328	3,732	14,223	1,353	501	1,277
1979 .....	60,106	51,171	8,935	9,037	2,533	27,885	3,700	13,694	1,400	555	1,302
1980 .....	60,258	51,084	9,174	9,457	2,640	27,678	3,700	13,317	1,400	632	1,434
Intermediate alternative projections <sup>2</sup>											
1981 .....	59,747	50,615	9,132	9,760	2,682	27,356	3,600	12,833	1,400	666	1,450
1982 .....	59,388	50,146	9,242	9,906	2,714	27,161	3,600	12,383	1,400	696	1,528
1983 .....	59,022	49,735	9,287	9,839	2,674	27,023	3,600	12,142	1,400	731	1,613
1984 .....	58,877	49,545	9,332	9,730	2,621	26,905	3,600	12,134	1,400	776	1,711
1985 .....	58,931	49,585	9,346	9,612	2,562	26,951	3,600	12,215	1,400	807	1,784
1986 .....	59,365	49,879	9,486	9,584	2,536	27,359	3,700	12,097	1,400	839	1,850
1987 .....	59,883	50,252	9,631	9,576	2,517	27,987	3,800	11,817	1,400	872	1,914
1988 .....	60,275	50,634	9,641	9,591	2,507	28,722	3,800	11,436	1,400	885	1,934
1989 .....	60,907	51,141	9,766	9,636	2,503	29,447	3,900	11,158	1,400	900	1,963
1990 .....	61,699	51,806	9,893	9,616	2,485	30,244	4,000	11,023	1,400	923	2,008
Low alternative projections <sup>2</sup>											
1981 .....	58,789	49,958	8,831	9,265	2,515	27,356	3,600	12,833	1,400	504	1,316
1982 .....	58,208	49,341	8,867	9,279	2,500	27,161	3,600	12,383	1,400	518	1,367
1983 .....	57,862	48,954	8,908	9,245	2,474	27,023	3,600	12,142	1,400	544	1,434
1984 .....	57,701	48,770	8,931	9,163	2,430	26,905	3,600	12,134	1,400	568	1,501
1985 .....	57,756	48,819	8,937	9,068	2,384	26,951	3,600	12,215	1,400	585	1,553
1986 .....	58,048	49,022	9,026	8,970	2,335	27,359	3,700	12,097	1,400	596	1,591
1987 .....	58,440	49,328	9,112	8,920	2,301	27,987	3,800	11,817	1,400	604	1,611
1988 .....	58,769	49,660	9,109	8,890	2,280	28,722	3,800	11,436	1,400	612	1,629
1989 .....	59,327	50,123	9,204	8,903	2,263	29,447	3,900	11,158	1,400	615	1,641
1990 .....	60,030	50,741	9,289	8,858	2,241	30,244	4,000	11,023	1,400	616	1,648
High alternative projections <sup>2</sup>											
1981 .....	60,106	50,899	9,207	10,025	2,728	27,356	3,600	12,833	1,400	685	1,479
1982 .....	59,992	50,616	9,376	10,339	2,789	27,161	3,600	12,383	1,400	733	1,587
1983 .....	60,188	50,604	9,584	10,633	2,844	27,023	3,600	12,142	1,400	806	1,740
1984 .....	60,554	50,788	9,766	10,869	2,876	26,905	3,600	12,134	1,400	880	1,890
1985 .....	61,141	51,214	9,927	11,096	2,903	26,951	3,600	12,215	1,400	952	2,024
1986 .....	61,971	51,788	10,183	11,312	2,927	27,359	3,700	12,097	1,400	1,020	2,156
1987 .....	62,839	52,425	10,414	11,543	2,954	27,987	3,800	11,817	1,400	1,078	2,260
1988 .....	63,627	53,088	10,539	11,802	2,994	28,722	3,800	11,436	1,400	1,128	2,345
1989 .....	64,686	53,893	10,793	12,103	3,040	29,447	3,900	11,158	1,400	1,185	2,453
1990 .....	65,846	54,836	11,010	12,336	3,073	30,244	4,000	11,023	1,400	1,233	2,537

<sup>1</sup>Grade K-8 and 9-12 enrollment numbers are from table 6. Enrollment of higher education numbers are from table 9.

<sup>2</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

NOTE.—Because of rounding, details may not add to totals.

Table S.—Nursery and kindergarten enrollment, with alternative projections, by age and sex of student and control of school.  
50 States and D.C., fall 1970 to 1990<sup>1</sup>

(In thousands)

Age	Total	Public					Private				
		Total	Years old				Total	Years old			
			3	4	5	6		3	4	5	6
1970 .....	4,279	2,981	123	494	2,214	150	1,298	332	512	429	25
1971 .....	4,330	3,007	107	486	2,254	160	1,323	323	562	417	21
1972 .....	4,417	3,036	150	532	2,188	166	1,381	385	588	387	21
1973 .....	4,399	2,982	137	518	2,175	152	1,417	378	659	368	12
1974 .....	4,858	3,149	178	543	2,280	148	1,709	506	778	413	12
1975 .....	5,141	3,425	191	645	2,417	172	1,716	492	773	437	14
1976 .....	4,996	3,418	180	608	2,451	179	1,578	422	740	389	27
1977 .....	4,806	3,225	198	591	2,242	194	1,581	447	699	400	35
1978 .....	4,813	3,161	233	601	2,132	195	1,652	526	712	379	35
1979 .....	4,895	3,230	232	606	2,177	215	1,665	514	787	348	16
1980 .....	5,162	3,322	237	602	2,227	256	1,840	620	821	370	29
Intermediate alternative projections <sup>2</sup>											
1981 .....	5,205	3,345	258	628	2,205	254	1,860	639	830	365	26
1982 .....	5,372	3,429	274	655	2,251	249	1,943	679	865	373	26
1983 .....	5,584	3,549	292	682	2,320	255	2,035	723	901	385	26
1984 .....	5,859	3,710	310	722	2,415	263	2,149	768	954	400	27
1985 .....	6,127	3,881	324	754	2,530	273	2,246	803	996	419	28
1986 .....	6,379	4,047	336	784	2,641	286	2,332	830	1,036	437	29
1987 .....	6,585	4,172	351	805	2,717	299	2,413	868	1,064	450	31
1988 .....	6,683	4,241	354	815	2,764	308	2,442	875	1,077	458	32
1989 .....	6,772	4,297	357	830	2,797	313	2,475	881	1,098	464	32
1990 .....	6,877	4,350	368	844	2,822	316	2,527	911	1,115	468	33
Low alternative projections <sup>2</sup>											
1981 .....	4,909	3,183	231	588	2,153	211	1,726	571	777	357	21
1982 .....	5,033	3,251	240	606	2,197	208	1,782	596	801	364	21
1983 .....	5,218	3,362	253	632	2,265	212	1,856	625	834	375	22
1984 .....	5,441	3,502	263	662	2,358	219	1,939	652	875	390	22
1985 .....	5,674	3,659	271	691	2,470	227	2,015	670	913	409	23
1986 .....	5,877	3,804	276	711	2,579	238	2,073	682	939	427	25
1987 .....	6,014	3,904	279	723	2,653	249	2,110	691	955	439	25
1988 .....	6,105	3,968	282	732	2,698	256	2,137	697	967	447	26
1989 .....	6,168	4,012	283	738	2,731	260	2,156	701	976	452	27
1990 .....	6,210	4,043	284	742	2,754	263	2,167	703	981	456	27
High alternative projections <sup>2</sup>											
1981 .....	5,253	3,364	263	642	2,205	254	1,889	650	848	365	26
1982 .....	5,468	3,466	284	682	2,251	249	2,002	701	902	373	26
1983 .....	5,786	3,624	317	732	2,320	255	2,162	784	967	385	26
1984 .....	6,142	3,814	346	790	2,415	263	2,328	858	1,043	400	27
1985 .....	6,512	4,026	367	856	2,530	273	2,486	908	1,131	419	28
1986 .....	6,866	4,228	396	905	2,641	286	2,638	977	1,195	437	29
1987 .....	7,137	4,378	417	945	2,717	299	2,759	1,030	1,248	450	31
1988 .....	7,337	4,484	431	981	2,764	308	2,853	1,067	1,296	458	32
1989 .....	7,547	4,582	456	1,016	2,797	313	2,965	1,128	1,341	464	32
1990 .....	7,716	4,660	475	1,047	2,822	316	3,056	1,173	1,382	468	33

<sup>1</sup>Includes nursery and kindergarten enrollments in regular schools and enrollments in independent nursery schools and kindergarten.

<sup>2</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

NOTE.—Because of rounding, details may not add to totals.

SOURCE. (1) U.S. Department of Education, National Center for Education Statistics, *Preprimary Enrollment*, and (2) U.S. Department of Commerce, Bureau of the Census, *Current Population Reports, Nursery School and Kindergarten Enrollment*. Series P-20.

Table 6.—Enrollment in grades K-8 and 9-12 of regular day schools, by control of institutions: 50 States and D.C., fall 1970 to 1990  
(In thousands)

Year (fall)	Total public and private			Public			Private		
	K-12	K-8	9-12	K-12	K-8	9-12	K-12	K-8	9-12
1970 .....	51,272	36,629	14,643	45,909	32,577	13,332	5,363	4,052	1,311
1971 .....	51,281	36,165	15,116	46,081	32,265	13,816	5,200 <sup>1</sup>	3,900	1,300
1972 .....	50,744	35,531	15,213	45,744	31,831	13,913	5,000 <sup>1</sup>	3,700	1,300
1973 .....	50,430	35,053	15,377	45,429	31,353	14,077	5,000 <sup>1</sup>	3,700	1,300
1974 .....	50,053	34,621	15,432	45,053	30,921	14,132	5,000 <sup>1</sup>	3,700	1,300
1975 .....	49,791	34,187	15,604	44,791	30,487	14,304	5,000 <sup>1</sup>	3,700	1,300
1976 .....	49,484	33,831	15,653	44,317	30,006	14,311	5,167 <sup>1</sup>	3,825	1,342
1977 .....	48,716	33,133	15,583	43,577	29,336	14,240	5,140	3,797	1,343
1978 .....	47,636	32,060	15,576	42,550	28,328	14,223	5,085	3,732	1,353
1979 .....	46,679	31,585	15,094	41,579	27,885	13,694	5,100 <sup>1</sup>	3,700	1,400
1980 .....	46,095 <sup>2</sup>	31,378	14,717	40,995	27,678	13,317	5,100 <sup>1</sup>	3,700	1,400
Projected <sup>3</sup>									
1981 .....	45,189	30,956	14,233	40,189	27,356	12,833	5,000	3,600	1,400
1982 .....	44,544	30,761	13,783	39,544	27,161	12,383	5,000	3,600	1,400
1983 .....	44,165	30,623	13,542	39,165	27,023	12,142	5,000	3,600	1,400
1984 .....	44,039	30,505	13,534	39,039	26,905	12,134	5,000	3,600	1,400
1985 .....	44,166	30,551	13,615	39,166	26,951	12,215	5,000	3,600	1,400
1986 .....	44,556	31,059	13,497	39,456	27,359	12,097	5,100	3,700	1,400
1987 .....	45,004	31,787	13,217	39,804	27,987	11,817	5,200	3,800	1,400
1988 .....	45,358	32,522	12,836	40,158	28,722	11,436	5,200	3,800	1,400
1989 .....	45,905	33,347	12,558	40,605	29,447	11,158	5,300	3,900	1,400
1990 .....	46,667	34,244	12,423	41,267	30,244	11,023	5,400	4,000	1,400 .

<sup>1</sup>Estimated.

<sup>2</sup>Preliminary, private figures rounded to nearest 100,000.

<sup>3</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

NOTE.—Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics publications. (1) *Statistics of Public Elementary and Secondary Day Schools*, (2) *Bulletin: Selected Public and Private Elementary and Secondary Education Statistics*, October 23, 1979; and (3) *Statistics of Nonpublic Elementary and Secondary School*, and (4) unpublished NCES tabulations.

Table 7.—Enrollment in regular elementary and secondary day schools, by control and organizational level of institution:  
50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Total public and private			Public			Private		
	K-12	Elementary	Secondary	K-12	Elementary	Secondary	K-12	Elementary	Secondary
1970 .....	51,272	31,553	19,719	45,909	27,501	18,408	5,363	4,052	1,311
1971 .....	51,281	31,588	19,693	46,081	27,688	18,393	5,200 <sup>1</sup>	3,900	1,300
1972 .....	50,744	31,023	19,721	45,744	27,323	18,421	5,000 <sup>1</sup>	3,700	1,300
1973 .....	50,430	30,135	20,295	45,429	26,435	18,995	5,000 <sup>1</sup>	3,700	1,300
1974 .....	50,053	30,082	19,971	45,053	26,382	18,671	5,000 <sup>1</sup>	3,700	1,300
1975 .....	49,791	29,340	20,451	44,791	25,640	19,151	5,000 <sup>1</sup>	3,700	1,300
1976 .....	49,484	29,255	20,229	44,317	25,430	18,887	5,167	3,825	1,342
1977 .....	48,716	28,751	19,966	43,577	24,954	18,623	5,140	3,797	1,343
1978 .....	47,636	28,749	18,887	42,550	25,017	17,534	5,085	3,732	1,353
1979 .....	46,679	28,551	18,128	41,579	24,851	16,728	5,100 <sup>1</sup>	3,700	1,400
1980 .....	46,095 <sup>2</sup>	27,987	18,108	40,995	24,287	16,708	5,100 <sup>1</sup>	3,700	1,400
Projected <sup>3</sup>									
1981 .....	45,189	27,555	17,634	40,189	23,955	16,234	5,000	3,600	1,400
1982 .....	44,544	27,286	17,258	39,544	23,686	15,858	5,000	3,600	1,400
1983 .....	44,165	27,106	17,059	39,165	23,506	15,659	5,000	3,600	1,400
1984 .....	44,039	27,113	16,926	39,039	23,513	15,526	5,000	3,600	1,400
1985 .....	44,166	27,338	16,828	39,166	23,738	15,428	5,000	3,600	1,400
1986 .....	44,556	27,936	16,620	39,456	24,236	15,220	5,100	3,700	1,400
1987 .....	45,004	28,660	16,344	39,804	24,860	14,944	5,200	3,800	1,400
1988 .....	45,358	29,389	15,969	40,158	25,589	14,569	5,200	3,800	1,400
1989 .....	45,905	30,205	15,700	40,605	26,305	14,300	5,300	3,900	1,400
1990 .....	46,667	31,022	15,645	41,267	27,022	14,245	5,400	4,000	1,400

<sup>1</sup>Estimated.

<sup>2</sup>Preliminary, private figures rounded to nearest 100,000.

<sup>3</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics publications. (1) *Statistics of Public Elementary and Secondary Day Schools*, (2) *Bulletin. Selected Public and Private Elementary and Secondary Education Statistics*, October 23, 1979; (3) *Statistics of Nonpublic Elementary and Secondary School*, and (4) unpublished NCES tabulations.

NOTE.—Because of rounding, details may not add to totals.

Table 8A.—Enrollment in all institutions of higher education, by age, sex and attendance status, with intermediate alternative projections: 50 States and D.C., fall 1970, 1975, 1980, 1985 and 1990

(In thousands)

Age	1970 (Estimated)			1975 (Estimated)			1980 (Estimated)			1985 (Projected) <sup>1</sup>			1990 (Projected) <sup>1</sup>		
	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time
Total . . . . .	8,581	5,815	2,766	11,185	6,842	4,343	12,097	7,098	4,999	12,174	6,781	5,393	12,101	6,536	5,565
16 and 17 years . . .	258	241	17	278	242	36	247	216	32	218	194	24	201	179	22
18 and 19 years . . .	2,599	2,405	194	2,785	2,510	275	2,899	2,581	321	2,418	2,147	271	2,375	2,104	271
20 and 21 years . . .	1,880	1,647	233	2,243	1,853	390	2,424	2,061	364	2,207	1,855	352	1,995	1,677	318
22 to 24 years . . . .	1,457	881	576	1,754	1,008	746	1,988	1,173	815	2,071	1,293	778	1,865	1,199	666
25 to 29 years . . . .	1,075	407	668	1,774	692	1,082	1,873	611	1,261	2,101	742	1,359	2,091	760	1,331
30 to 34 years . . . .	487	100	387	967	279	688	1,243	264	978	1,340	297	1,043	1,453	322	1,131
35 years and over . .	824	134	690	1,384	257	1,127	1,422	192	1,229	1,821	253	1,568	2,123	295	1,828
Men . . . . .	5,044	3,505	1,540	6,149	3,926	2,222	5,874	3,689	2,185	5,917	3,522	2,395	5,770	3,325	2,445
16 and 17 years . . .	129	124	5	126	109	17	99	84	15	90	78	12	82	72	10
18 and 19 years . . .	1,349	1,265	84	1,397	1,269	128	1,375	1,229	147	1,159	1,037	122	1,140	1,020	120
20 and 21 years . . .	1,095	990	105	1,245	1,053	192	1,260	1,105	155	1,156	994	162	1,044	898	146
22 and 24 years . . .	964	650	314	1,048	686	362	1,063	686	377	1,066	702	364	913	601	312
25 to 29 years . . . .	783	327	456	1,123	474	649	994	379	615	1,130	448	682	1,107	439	668
30 to 34 years . . . .	308	72	236	557	184	373	576	129	447	642	158	484	695	171	524
35 years and over . .	415	75	340	654	152	502	507	77	430	674	104	570	788	122	666
Women . . . . .	3,537	2,311	1,225	5,036	2,915	2,120	6,223	3,409	2,814	6,257	3,259	2,998	6,331	3,211	3,120
16 and 17 years . . .	129	117	12	152	133	19	149	132	17	128	116	12	119	107	12
18 and 19 years . . .	1,250	1,140	110	1,388	1,241	147	1,524	1,352	174	1,259	1,110	149	1,234	1,083	151
20 and 21 years . . .	785	657	128	998	800	198	1,165	956	209	1,051	861	190	951	779	172
22 to 24 years . . . .	493	231	262	706	322	384	925	487	438	1,005	591	414	952	598	354
25 to 29 years . . . .	292	80	212	651	218	433	879	232	646	971	294	677	984	321	663
30 to 34 years . . . .	179	28	151	410	95	315	667	135	531	698	139	559	758	151	607
35 years and over . .	409	59	350	730	105	625	915	115	799	1,147	149	998	1,334	173	1,162

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. (1) U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*; and (2) U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "School Enrollment — Social and Economic Characteristics of Students," Series P-20.

NOTE.—Because of rounding, details may not add to totals.

Table 8B.—Enrollment in all institutions of higher education, by age, sex and attendance status, with low alternative projections:  
50 States and D.C., fall 1970, 1975, 1980, 1985 and 1990

(In thousands)

Age	1970 (Estimated)			1975 (Estimated)			1980 (Estimated)			1985 (Projected) <sup>1</sup>			1990 (Projected) <sup>1</sup>		
	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time
Total . . . . .	8,581	5,815	2,766	11,185	6,842	4,343	12,097	7,098	4,999	11,452	6,285	5,167	11,099	5,819	5,280
16 and 17 years . . .	258	241	17	278	242	36	247	216	32	198	175	23	167	145	22
18 and 19 years . . .	2,599	2,405	194	2,785	2,510	275	2,899	2,581	321	2,363	2,096	267	2,279	2,018	261
20 and 21 years . . .	1,880	1,647	233	2,243	1,853	390	2,424	2,061	364	2,184	1,856	328	1,964	1,677	287
22 to 24 years . . .	1,457	881	576	1,754	1,008	746	1,988	1,173	815	1,870	1,089	781	1,568	900	668
25 to 29 years . . .	1,075	407	668	1,774	692	1,082	1,873	611	1,261	1,921	574	1,347	1,856	537	1,319
30 to 34 years . . .	487	100	387	967	279	688	1,243	264	978	1,320	273	1,047	1,422	286	1,136
35 years and over . .	824	134	690	1,384	257	1,127	1,422	192	1,229	1,594	222	1,372	1,842	257	1,585
Men . . . . .	5,044	3,505	1,540	6,149	3,926	2,222	5,874	3,689	2,185	5,453	3,241	2,212	5,157	2,942	2,215
16 and 17 years . . .	129	124	5	126	109	17	99	84	15	78	67	11	63	53	10
18 and 19 years . . .	1,349	1,265	84	1,397	1,269	128	1,375	1,229	147	1,110	986	124	1,056	934	122
20 and 21 years . . .	1,095	990	105	1,245	1,053	192	1,260	1,105	155	1,133	995	138	1,013	898	115
22 and 24 years . . .	964	650	314	1,048	686	362	1,063	686	377	1,005	638	367	827	513	314
25 to 29 years . . .	783	327	456	1,123	474	649	994	379	615	997	327	670	957	301	656
30 to 34 years . . .	308	72	236	557	184	373	576	129	447	622	134	488	664	135	529
35 years and over . .	415	75	340	654	152	502	507	77	430	506	94	412	575	108	467
Women . . . . .	3,537	2,311	1,225	5,036	2,915	2,120	6,223	3,409	2,814	5,999	3,044	2,955	5,942	2,877	3,065
16 and 17 years . . .	129	117	12	152	133	19	149	132	17	120	108	12	104	92	12
18 and 19 years . . .	1,250	1,140	110	1,388	1,241	147	1,524	1,352	174	1,253	1,110	143	1,223	1,084	139
20 and 21 years . . .	785	657	128	998	800	198	1,165	956	209	1,051	861	190	951	779	172
22 to 24 years . . .	493	231	262	706	322	384	925	487	438	865	451	414	741	387	354
25 to 29 years . . .	292	80	212	651	218	433	879	232	646	924	247	677	899	236	663
30 to 34 years . . .	179	28	151	410	95	315	667	135	531	698	139	559	758	151	607
35 years and over . .	409	59	350	730	105	625	915	115	799	1,088	128	960	1,267	149	1,118

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: (1) U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*; and (2) U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "School Enrollment — Social and Economic Characteristics of Students," Series P-20.

NOTE.—Because of rounding, details may not add to totals.



Table 8C.—Enrollment in all institutions of higher education, by age, sex and attendance status, with high alternative projections:  
50 States and D.C., fall 1970, 1975, 1980, 1985 and 1990

(In thousands)

Age	1970 (Estimated)			1975 (Estimated)			1980 (Estimated)			1985 (Projected) <sup>1</sup>			1990 (Projected) <sup>1</sup>		
	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time	Total	Full-time	Part-time
Total . . . . .	8,581	5,815	2,766	11,185	6,842	4,343	12,097	7,098	4,999	13,999	7,557	6,442	15,409	7,812	7,597
16 and 17 years . . .	258	241	17	278	242	36	247	216	32	233	205	28	217	188	29
18 and 19 years . . .	2,599	2,405	194	2,785	2,510	275	2,899	2,581	321	2,678	2,363	315	2,848	2,495	353
20 and 21 years . . .	1,880	1,647	233	2,243	1,853	390	2,424	2,061	364	2,574	2,188	386	2,596	2,223	373
22 to 24 years . . .	1,457	881	576	1,754	1,008	746	1,988	1,173	815	2,327	1,386	941	2,258	1,331	927
25 to 29 years . . .	1,075	407	668	1,774	692	1,082	1,873	611	1,261	2,411	782	1,629	2,643	796	1,847
30 to 34 years . . .	487	100	387	967	279	688	1,243	264	978	1,719	362	1,357	2,222	447	1,775
35 years and over . .	824	134	690	1,384	257	1,127	1,422	192	1,229	2,058	270	1,788	2,624	329	2,295
Men . . . . .	5,044	3,505	1,540	6,149	3,926	2,222	5,874	3,689	2,185	7,441	3,890	2,551	6,654	3,906	2,748
16 and 17 years . . .	129	124	5	126	109	17	99	84	15	98	87	11	90	80	10
18 and 19 years . . .	1,349	1,265	84	1,397	1,269	128	1,375	1,229	147	1,265	1,127	138	1,340	1,190	150
20 and 21 years . . .	1,095	990	105	1,245	1,053	192	1,260	1,105	155	1,336	1,174	162	1,341	1,195	146
22 and 24 years . . .	964	650	314	1,048	686	362	1,063	686	377	1,166	762	404	1,054	679	375
25 to 29 years . . .	783	327	456	1,123	474	649	994	379	615	1,202	472	730	1,237	462	775
30 to 34 years . . .	308	72	236	557	184	373	576	129	447	699	163	536	805	176	629
35 years and over . .	415	75	340	654	152	502	507	77	430	674	104	570	787	122	665
Women . . . . .	3,537	2,311	1,225	5,036	2,915	2,120	6,223	3,409	2,814	7,558	3,667	3,891	8,755	3,906	4,849
16 and 17 years . . .	129	117	12	152	133	19	149	132	17	135	118	17	127	108	19
18 and 19 years . . .	1,250	1,140	110	1,388	1,241	147	1,524	1,352	174	1,413	1,236	177	1,508	1,305	203
20 and 21 years . . .	785	657	128	998	800	198	1,165	956	209	1,238	1,014	224	1,255	1,028	227
22 to 24 years . . .	493	231	262	706	322	384	925	487	438	1,161	624	537	1,204	652	552
25 to 29 years . . .	292	80	212	651	218	433	879	232	646	1,209	310	899	1,406	334	1,072
30 to 34 years . . .	179	28	151	410	95	315	667	135	531	1,020	199	821	1,417	271	1,146
35 years and over . .	409	59	350	730	105	625	915	115	799	1,384	166	1,218	1,837	207	1,630

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: (1) U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*; and (2) U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "School Enrollment — Social and Economic Characteristics of Students," Series P-20.

NOTE.—Because of rounding, details may not add to totals.

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**Table 9.—Total enrollment in all institutions of higher education, with alternative projections, by sex and attendance status of students and control of institutions: 50 States and D.C., fall 1970 to 1990**

(In thousands)

Year (fall)	Total enrollment	Sex		Attendance status		Control	
		Men	Women	Full-time	Part-time	Public	Private
1970 .....	8,581	5,044	3,537	5,815	2,766	6,428	2,153
1971 .....	8,949	5,207	3,742	6,077	2,871	6,804	2,144
1972 .....	9,215	5,239	3,976	6,072	3,142	7,071	2,144
1973 .....	9,602	5,371	4,231	6,189	3,413	7,420	2,183
1974 .....	10,224	5,622	4,601	6,370	3,853	7,989	2,235
1975 .....	11,185	6,149	5,036	6,841	4,344	8,835	2,350
1976 .....	11,012	5,811	5,201	6,717	4,295	8,653	2,359
1977 .....	11,286	5,789	5,497	6,793	4,493	8,847	2,437
1978 .....	11,259	5,640	5,619	6,667	4,592	8,784	2,475
1979 .....	11,570	5,683	5,887	6,793	4,776	9,037	2,533
1980 .....	12,097	5,874	6,223	7,098	4,999	9,457	2,640
Intermediate alternative projections <sup>1</sup>							
1981 .....	12,442	6,159	6,283	7,379	5,063	9,760	2,682
1982 .....	12,620	6,238	6,382	7,459	5,161	9,906	2,714
1983 .....	12,513	6,154	6,359	7,263	5,250	9,839	2,674
1984 .....	12,351	6,039	6,312	7,025	5,326	9,730	2,621
1985 .....	12,174	5,917	6,257	6,781	5,393	9,612	2,562
1986 .....	12,120	5,865	6,255	6,669	5,451	9,584	2,536
1987 .....	12,093	5,823	6,270	6,601	5,492	9,576	2,517
1988 .....	12,098	5,802	6,296	6,585	5,513	9,591	2,507
1989 .....	12,139	5,803	6,336	6,593	5,546	9,636	2,503
1990 .....	12,101	5,770	6,331	6,536	5,565	9,616	2,485
Low alternative projections <sup>1</sup>							
1981 .....	11,780	5,766	6,014	6,814	4,966	9,265	2,515
1982 .....	11,779	5,730	6,049	6,747	5,032	9,279	2,500
1983 .....	11,719	5,664	6,055	6,628	5,091	9,245	2,474
1984 .....	11,593	5,564	6,029	6,460	5,133	9,163	2,430
1985 .....	11,452	5,453	5,999	6,285	5,167	9,068	2,384
1986 .....	11,305	5,342	5,963	6,106	5,199	8,970	2,335
1987 .....	11,221	5,276	5,945	5,989	5,232	8,920	2,301
1988 .....	11,170	5,223	5,947	5,925	5,245	8,890	2,280
1989 .....	11,166	5,203	5,963	5,901	5,265	8,903	2,263
1990 .....	11,099	5,157	5,942	5,819	5,280	8,858	2,241
High alternative projections <sup>1</sup>							
1981 .....	12,753	6,172	6,581	7,390	5,363	10,025	2,728
1982 .....	13,128	6,279	6,849	7,490	5,638	10,339	2,789
1983 .....	13,477	6,365	7,112	7,560	5,917	10,633	2,844
1984 .....	13,745	6,410	7,335	7,561	6,184	10,869	2,876
1985 .....	13,999	6,441	7,558	7,557	6,442	11,096	2,903
1986 .....	14,239	6,459	7,780	7,540	6,699	11,312	2,927
1987 .....	14,497	6,486	8,011	7,554	6,943	11,543	2,954
1988 .....	14,796	6,535	8,261	7,640	7,156	11,802	2,994
1989 .....	15,143	6,608	8,535	7,760	7,383	12,103	3,040
1990 .....	15,409	6,654	8,755	7,812	7,597	12,336	3,073

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

**Table 9A.—Total enrollment in 4-year institutions of higher education, with alternative projections, by sex and attendance status of students and control of institutions: 50 States and D.C., fall 1970 to 1990**

(In thousands)

Year (fall)	Total enrollment	Sex		Attendance status		Control	
		Men	Women	Full-time	Part-time	Public	Private
1970 .....	6,358	3,726	2,631	4,650	1,708	4,326	2,032
1971 .....	6,463	3,758	2,705	4,787	1,676	4,438	2,024
1972 .....	6,459	3,695	2,764	4,732	1,727	4,430	2,029
1973 .....	6,590	3,718	2,872	4,757	1,833	4	2,060
1974 .....	6,820	3,791	3,029	4,861	1,959	4 03	2,117
1975 .....	7,215	3,984	3,231	5,080	2,134	1,998	2,217
1976 .....	7,129	3,831	3,298	5,053	2,076	4,902	2,227
1977 .....	7,242	3,823	3,419	5,138	2,104	4,945	2,297
1978 .....	7,232	3,756	3,476	5,109	2,123	4,912	2,320
1979 .....	7,353	3,761	3,592	5,202	2,151	4,980	2,373
1980 .....	7,571	3,827	3,744	5,344	2,227	5,129	2,442
Intermediate alternative projections <sup>1</sup>							
1981 .....	7,707	3,997	3,710	5,464	2,243	5,223	2,484
1982 .....	7,789	4,045	3,744	5,517	2,272	5,278	2,511
1983 .....	7,673	3,970	3,703	5,372	2,301	5,198	2,475
1984 .....	7,513	3,876	3,637	5,193	2,320	5,087	2,426
1985 .....	7,342	3,774	3,568	5,005	2,337	4,970	2,372
1986 .....	7,260	3,720	3,540	4,914	2,346	4,913	2,347
1987 .....	7,195	3,674	3,521	4,849	2,346	4,869	2,326
1988 .....	7,165	3,652	3,513	4,823	2,342	4,849	2,316
1989 .....	7,149	3,630	3,519	4,817	2,332	4,840	2,309
1990 .....	7,101	3,601	3,500	4,780	2,321	4,808	2,293
Low alternative projections <sup>1</sup>							
1981 .....	7,236	3,713	3,523	5,040	2,196	4,908	2,328
1982 .....	7,195	3,682	3,513	4,983	2,212	4,881	2,314
1983 .....	7,119	3,629	3,490	4,895	2,224	4,829	2,290
1984 .....	6,993	3,554	3,439	4,766	2,227	4,744	2,249
1985 .....	6,857	3,470	3,387	4,629	2,228	4,652	2,205
1986 .....	6,711	3,376	3,335	4,487	2,224	4,553	2,158
1987 .....	6,609	3,316	3,293	4,388	2,221	4,484	2,125
1988 .....	6,542	3,273	3,269	4,327	2,215	4,438	2,104
1989 .....	6,499	3,240	3,259	4,300	2,199	4,412	2,087
1990 .....	6,433	3,203	3,230	4,244	2,189	4,368	2,065
High alternative projections <sup>1</sup>							
1981 .....	7,841	3,991	3,850	5,472	2,369	5,315	2,526
1982 .....	8,018	4,056	3,962	5,543	2,475	5,435	2,583
1983 .....	8,179	4,102	4,077	5,597	2,582	5,545	2,634
1984 .....	8,273	4,121	4,152	5,595	2,678	5,610	2,663
1985 .....	8,355	4,128	4,227	5,584	2,771	5,667	2,688
1986 .....	8,420	4,117	4,303	5,562	2,858	5,712	2,708
1987 .....	8,493	4,114	4,379	5,556	2,937	5,762	2,731
1988 .....	8,607	4,136	4,471	5,602	3,005	5,841	2,766
1989 .....	8,743	4,158	4,585	5,678	3,065	5,938	2,805
1990 .....	8,847	4,179	4,668	5,721	3,126	6,011	2,836

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

Table 9B.—Total enrollment in 2-year institutions of higher education, with alternative projections, by sex and attendance status of students and control of institutions: 50 States and D.C., 1970 to 1990

(In thousands)

Year (fall)	Total enrollment	Sex		Attendance status		Control	
		Men	Women	Full-time	Part-time	Public	Private
1970 .....	2,223	1,317	906	1,165	1,058	2,102	121
1971 .....	2,486	1,449	1,037	1,291	1,195	2,366	120
1972 .....	2,756	1,544	1,212	1,340	1,416	2,641	115
1973 .....	3,012	1,653	1,360	1,432	1,580	2,890	122
1974 .....	3,404	1,832	1,572	1,509	1,895	3,285	119
1975 .....	3,970	2,165	1,805	1,761	2,209	3,836	134
1976 .....	3,883	1,980	1,903	1,664	2,219	3,752	132
1977 .....	4,042	1,965	2,077	1,654	2,388	3,902	140
1978 .....	4,028	1,885	2,143	1,558	2,470	3,871	155
1979 .....	4,217	1,922	2,295	1,592	2,625	4,057	160
1980 .....	4,526	2,047	2,479	1,754	2,772	4,329	198
Intermediate alternative projections <sup>1</sup>							
1981 .....	4,735	2,162	2,573	1,915	2,820	4,537	198
1982 .....	4,831	2,193	2,638	1,942	2,889	4,628	203
1983 .....	4,840	2,184	2,656	1,891	2,949	4,641	199
1984 .....	4,838	2,163	2,675	1,832	3,006	4,643	195
1985 .....	4,832	2,143	2,689	1,776	3,056	4,642	190
1986 .....	4,860	2,145	2,715	1,755	3,105	4,671	189
1987 .....	4,898	2,149	2,749	1,752	3,146	4,707	191
1988 .....	4,933	2,150	2,783	1,762	3,171	4,742	191
1989 .....	4,990	2,173	2,817	1,776	3,214	4,796	194
1990 .....	5,000	2,169	2,831	1,756	3,244	4,808	192
Low alternative projections <sup>1</sup>							
1981 .....	4,544	2,053	2,491	1,774	2,770	4,357	187
1982 .....	4,584	2,048	2,536	1,764	2,820	4,398	186
1983 .....	4,600	2,035	2,565	1,733	2,867	4,416	184
1984 .....	4,600	2,010	2,590	1,694	2,906	4,419	181
1985 .....	4,595	1,983	2,612	1,656	2,939	4,416	179
1986 .....	4,594	1,966	2,628	1,619	2,975	4,417	177
1987 .....	4,612	1,960	2,652	1,601	3,011	4,436	176
1988 .....	4,628	1,950	2,678	1,598	3,030	4,452	176
1989 .....	4,667	1,963	2,704	1,601	3,066	4,491	176
1990 .....	4,666	1,954	2,712	1,575	3,091	4,490	176
High alternative projections <sup>1</sup>							
1981 .....	4,912	2,181	2,731	1,918	2,994	4,710	202
1982 .....	5,110	2,223	2,887	1,947	3,163	4,904	206
1983 .....	5,298	2,263	3,035	1,963	3,335	5,088	210
1984 .....	5,472	2,289	3,183	1,966	3,506	5,259	213
1985 .....	5,644	2,313	3,331	1,973	3,671	5,429	215
1986 .....	5,819	2,342	3,477	1,978	3,841	5,600	219
1987 .....	6,004	2,372	3,632	1,998	4,006	5,781	223
1988 .....	6,189	2,399	3,790	2,038	4,151	5,961	228
1989 .....	6,400	2,450	3,950	2,082	4,318	6,165	235
1990 .....	6,562	2,475	4,087	2,091	4,471	6,325	237

<sup>1</sup> For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

**Table 10.—Total enrollment in all institutions of higher education, with alternative projections, by sex and attendance status:  
50 States and D.C., fall 1970 to 1990**

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	8,581	3,505	1,540	2,311	1,225
1971 .....	8,949	3,630	1,578	2,447	1,293
1972 .....	9,215	3,557	1,681	2,514	1,461
1973 .....	9,602	3,579	1,792	2,612	1,621
1974 .....	10,224	3,646	1,976	2,724	1,877
1975 .....	11,185	3,926	2,222	2,915	2,120
1976 .....	11,012	3,704	2,107	3,014	2,188
1977 .....	11,286	3,650	2,138	3,142	2,354
1978 .....	11,259	3,527	2,113	3,140	2,479
1979 .....	11,570	3,543	2,140	3,251	2,636
1980 .....	12,097	3,689	2,185	3,409	2,814
Intermediate alternative projections <sup>1</sup>					
1981 .....	12,442	3,897	2,262	3,482	2,801
1982 .....	12,620	3,937	2,301	3,522	2,860
1983 .....	12,513	3,816	2,338	3,447	2,912
1984 .....	12,351	3,671	2,368	3,354	2,958
1985 .....	12,174	3,522	2,395	3,259	2,998
1986 .....	12,120	3,450	2,415	3,219	3,036
1987 .....	12,093	3,395	2,428	3,206	3,064
1988 .....	12,098	3,369	2,433	3,216	3,080
1989 .....	12,139	3,361	2,442	3,232	3,104
1990 .....	12,101	3,325	2,445	3,211	3,120
Low alternative projections <sup>1</sup>					
1981 .....	11,780	3,565	2,201	3,249	2,765
1982 .....	11,779	3,518	2,212	3,229	2,820
1983 .....	11,719	3,445	2,219	3,183	2,872
1984 .....	11,593	3,346	2,218	3,114	2,915
1985 .....	11,452	3,241	2,212	3,044	2,955
1986 .....	11,305	3,130	2,212	2,976	2,987
1987 .....	11,221	3,058	2,218	2,931	3,014
1988 .....	11,170	3,006	2,217	2,919	3,028
1989 .....	11,166	2,985	2,218	2,916	3,047
1990 .....	11,099	2,942	2,215	2,877	3,065
High alternative projections <sup>1</sup>					
1981 .....	12,753	3,865	2,307	3,525	3,056
1982 .....	13,128	3,910	2,369	3,580	3,269
1983 .....	13,477	3,928	2,437	3,632	3,480
1984 .....	13,745	3,914	2,496	3,647	3,688
1985 .....	13,999	3,890	2,551	3,667	3,891
1986 .....	14,239	3,856	2,603	3,684	4,096
1987 .....	14,497	3,839	2,647	3,715	4,296
1988 .....	14,796	3,854	2,681	3,786	4,475
1989 .....	15,143	3,890	2,718	3,870	4,665
1990 .....	15,409	3,906	2,748	3,906	4,849

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

**Table 10A.—Total enrollment in public 4-year institutions, with alternative projections, by sex and attendance status: 50 States and D.C., fall 1970 to 1990**

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	4,326	1,853	626	1,295	552
1971 .....	4,438	1,918	613	1,355	553
1972 .....	4,430	1,860	626	1,358	586
1973 .....	4,530	1,851	658	1,394	627
1974 .....	4,703	1,870	694	1,448	691
1975 .....	4,998	1,947	760	1,522	767
1976 .....	4,902	1,879	709	1,554	759
1977 .....	4,945	1,873	696	1,606	770
1978 .....	4,911	1,822	687	1,613	789
1979 .....	4,980	1,832	676	1,661	810
1980 .....	5,129	1,873	685	1,719	851
Intermediate alternative projections <sup>1</sup>					
1981 .....	5,223	1,950	721	1,724	828
1982 .....	5,278	1,971	731	1,737	839
1983 .....	5,198	1,909	742	1,699	848
1984 .....	5,087	1,836	750	1,648	853
1985 .....	4,970	1,760	757	1,595	858
1986 .....	4,913	1,721	758	1,571	863
1987 .....	4,869	1,690	759	1,558	862
1988 .....	4,849	1,674	760	1,557	858
1989 .....	4,840	1,667	754	1,561	858
1990 .....	4,808	1,651	751	1,552	854
Low alternative projections <sup>1</sup>					
1981 .....	4,908	1,782	701	1,608	817
1982 .....	4,881	1,760	702	1,591	828
1983 .....	4,829	1,724	702	1,567	836
1984 .....	4,744	1,676	700	1,527	841
1985 .....	4,652	1,624	695	1,487	846
1986 .....	4,553	1,566	690	1,448	849
1987 .....	4,484	1,527	689	1,420	848
1988 .....	4,438	1,495	688	1,408	843
1989 .....	4,412	1,487	680	1,403	842
1990 .....	4,368	1,467	676	1,386	839
High alternative projections <sup>1</sup>					
1981 .....	5,315	1,931	734	1,745	905
1982 .....	5,435	1,956	752	1,767	960
1983 .....	5,545	1,966	772	1,792	1,015
1984 .....	5,610	1,962	789	1,794	1,065
1985 .....	5,667	1,951	805	1,796	1,115
1986 .....	5,712	1,932	816	1,799	1,165
1987 .....	5,762	1,920	826	1,806	1,210
1988 .....	5,841	1,925	836	1,833	1,247
1989 .....	5,938	1,941	837	1,870	1,290
1990 .....	6,011	1,952	842	1,889	1,328

<sup>1</sup> For methodological details, see *Volume II of Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

**Table 10B.—Total enrollment in public 2-year institutions, with alternative projections, by sex and attendance status: 50 States and D.C., fall 1970 to 1990**

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	2,102	682	573	386	461
1971 .....	2,366	746	642	448	529
1972 .....	2,641	750	737	500	654
1973 .....	2,890	793	800	545	751
1974 .....	3,285	833	941	586	925
1975 .....	3,836	989	1,108	674	1,066
1976 .....	3,752	858	1,061	704	1,129
1977 .....	3,902	805	1,098	739	1,259
1978 .....	3,873	738	1,084	700	1,351
1979 .....	4,057	739	1,122	729	1,468
1980 .....	4,329	812	1,152	784	1,581
Intermediate alternative projections <sup>1</sup>					
1981 .....	4,537	903	1,176	851	1,607
1982 .....	4,628	909	1,199	869	1,651
1983 .....	4,641	881	1,220	850	1,690
1984 .....	4,643	845	1,238	832	1,728
1985 .....	4,642	811	1,255	815	1,761
1986 .....	4,671	796	1,273	811	1,791
1987 .....	4,707	788	1,284	815	1,820
1988 .....	4,742	787	1,287	826	1,842
1989 .....	4,796	790	1,306	835	1,865
1990 .....	4,808	779	1,314	828	1,887
Low alternative projections <sup>1</sup>					
1981 .....	4,357	829	1,146	795	1,587
1982 .....	4,398	816	1,155	799	1,628
1983 .....	4,416	798	1,162	789	1,667
1984 .....	4,419	772	1,165	779	1,703
1985 .....	4,416	747	1,165	769	1,735
1986 .....	4,417	723	1,173	758	1,763
1987 .....	4,436	710	1,181	755	1,790
1988 .....	4,452	702	1,180	760	1,810
1989 .....	4,491	701	1,194	764	1,832
1990 .....	4,490	689	1,197	752	1,852
High alternative projections <sup>1</sup>					
1981 .....	4,710	896	1,201	860	1,753
1982 .....	4,904	903	1,236	880	1,885
1983 .....	5,088	905	1,273	893	2,017
1984 .....	5,259	897	1,307	903	2,152
1985 .....	5,429	890	1,339	916	2,284
1986 .....	5,600	883	1,374	927	2,416
1987 .....	5,781	884	1,403	944	2,530
1988 .....	5,961	893	1,421	972	2,675
1989 .....	6,165	906	1,457	999	2,803
1990 .....	6,325	907	1,481	1,006	2,931

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.



**Table 10C.—Total enrollment in private 4-year institutions, with alternative projections, by sex and attendance status: 50 States and D.C., fall 1970 to 1990**

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	2,032	921	327	582	202
1971 .....	2,024	918	310	596	200
1972 .....	2,029	904	305	609	210
1973 .....	2,060	890	319	623	229
1974 .....	2,117	902	325	641	248
1975 .....	2,217	943	332	667	274
1976 .....	2,227	921	322	699	286
1977 .....	2,297	925	329	734	309
1978 .....	2,320	919	327	755	319
1979 .....	2,373	924	329	785	336
1980 .....	2,442	936	333	816	357
Intermediate alternative projections <sup>1</sup>					
1981 .....	2,484	976	350	814	344
1982 .....	2,511	988	355	821	347
1983 .....	2,475	959	360	805	351
1984 .....	2,426	926	364	783	353
1985 .....	2,372	890	367	760	355
1986 .....	2,347	873	368	749	357
1987 .....	2,326	857	368	744	357
1988 .....	2,316	849	369	743	355
1989 .....	2,309	844	365	745	355
1990 .....	2,293	836	363	741	353
Low alternative projections <sup>1</sup>					
1981 .....	2,328	891	339	759	339
1982 .....	2,314	880	340	752	342
1983 .....	2,290	863	340	741	346
1984 .....	2,249	840	338	723	348
1985 .....	2,205	814	337	704	350
1986 .....	2,158	786	334	687	351
1987 .....	2,125	767	333	674	351
1988 .....	2,104	752	334	668	350
1989 .....	2,087	744	329	666	348
1990 .....	2,065	734	326	657	348
High alternative projections <sup>1</sup>					
1981 .....	2,526	970	356	826	374
1982 .....	2,583	983	365	837	398
1983 .....	2,634	989	375	850	420
1984 .....	2,663	987	383	852	441
1985 .....	2,688	982	390	855	461
1986 .....	2,708	974	395	857	482
1987 .....	2,731	968	400	862	501
1988 .....	2,766	969	406	875	516
1989 .....	2,805	975	405	892	533
1990 .....	2,836	979	406	901	550

<sup>1</sup> For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.



**Table 10D.—Total enrollment in private 2-year institutions, with alternative projections, by sex and attendance status: 50 States and D.C., fall 1970 to 1990**

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	121	49	14	48	10
1971 .....	120	48	13	48	11
1972 .....	115	43	13	47	11
1973 .....	122	45	15	50	14
1974 .....	119	41	16	49	13
1975 .....	134	47	22	52	13
1976 .....	132	46	15	57	14
1977 .....	141	47	14	63	16
1978 .....	155	48	15	72	20
1979 .....	160	48	13	77	22
1980 .....	198	68	15	90	24
Intermediate alternative projections <sup>1</sup>					
1981 .....	198	68	15	93	22
1982 .....	203	69	16	95	23
1983 .....	199	67	16	93	23
1984 .....	195	64	16	91	24
1985 .....	190	61	16	89	24
1986 .....	189	60	16	88	25
1987 .....	191	60	17	89	25
1988 .....	191	59	17	90	25
1989 .....	194	60	17	91	26
1990 .....	192	59	17	90	26
Low alternative projections <sup>1</sup>					
1981 .....	187	63	15	87	22
1982 .....	186	62	15	87	22
1983 .....	184	60	15	86	23
1984 .....	181	58	15	85	23
1985 .....	179	56	15	84	24
1986 .....	177	55	15	83	24
1987 .....	176	54	15	82	25
1988 .....	176	53	15	83	25
1989 .....	176	53	15	83	25
1990 .....	176	52	16	82	26
High alternative projections <sup>1</sup>					
1981 .....	202	68	16	94	24
1982 .....	206	68	16	96	26
1983 .....	210	68	17	97	28
1984 .....	213	68	17	98	30
1985 .....	215	67	17	100	31
1986 .....	219	67	18	101	33
1987 .....	223	67	18	103	35
1988 .....	228	67	18	106	37
1989 .....	235	68	19	109	39
1990 .....	237	68	19	110	40

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding details may not add to totals.

Table 11.—Undergraduate enrollment in all institutions, with alternative projections, by sex and attendance status: 50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	7,376	3,097	1,157	2,183	939
1971 .....	7,743	3,201	1,217	2,311	1,014
1972 .....	7,941	3,121	1,308	2,367	1,145
1973 .....	8,261	3,135	1,403	2,445	1,278
1974 .....	8,798	3,191	1,574	2,535	1,498
1975 .....	9,679	3,459	1,798	2,710	1,712
1976 .....	9,429	3,242	1,660	2,788	1,739
1977 .....	9,714	3,188	1,708	2,905	1,913
1978 .....	9,684	3,068	1,692	2,894	2,029
1979 .....	9,998	3,087	1,734	2,993	2,185
1980 .....	10,475	3,227	1,773	3,135	2,340
Intermediate alternative projections <sup>1</sup>					
1981 .....	10,734	3,405	1,819	3,188	2,322
1982 .....	10,882	3,437	1,852	3,218	2,375
1983 .....	10,754	3,318	1,882	3,133	2,421
1984 .....	10,570	3,171	1,906	3,030	2,463
1985 .....	10,382	3,026	1,930	2,927	2,499
1986 .....	10,317	2,952	1,951	2,881	2,533
1987 .....	10,293	2,906	1,964	2,863	2,560
1988 .....	10,296	2,885	1,961	2,872	2,578
1989 .....	10,362	2,888	1,985	2,887	2,602
1990 .....	10,334	2,857	1,991	2,865	2,621
Low alternative projections <sup>1</sup>					
1981 .....	10,167	3,122	1,772	2,980	2,293
1982 .....	10,162	3,079	1,783	2,958	2,342
1983 .....	10,101	3,014	1,790	2,909	2,388
1984 .....	9,980	2,922	1,791	2,840	2,427
1985 .....	9,849	2,828	1,789	2,769	2,463
1986 .....	9,715	2,727	1,794	2,702	2,492
1987 .....	9,646	2,664	1,803	2,660	2,519
1988 .....	9,604	2,623	1,794	2,652	2,535
1989 .....	9,632	2,613	1,811	2,653	2,555
1990 .....	9,581	2,577	1,812	2,618	2,574
High alternative projections <sup>1</sup>					
1981 .....	10,962	3,360	1,856	3,214	2,532
1982 .....	11,270	3,396	1,907	3,256	2,711
1983 .....	11,553	3,410	1,963	3,291	2,889
1984 .....	11,760	3,390	2,011	3,293	3,066
1985 .....	11,961	3,366	2,058	3,298	3,239
1986 .....	12,147	3,328	2,105	3,301	3,413
1987 .....	12,372	3,318	2,144	3,325	3,585
1988 .....	12,631	3,338	2,163	3,388	3,742
1989 .....	12,968	3,385	2,213	3,464	3,906
1990 .....	13,211	3,406	2,242	3,496	4,067

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

Table 11A.—Undergraduate enrollment in public 4-year institutions, with alternative projections, by sex and attendance status:  
50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	3,526	1,612	374	1,208	332
1971 .....	3,642	1,662	377	1,264	339
1972 .....	3,583	1,602	378	1,261	342
1973 .....	3,634	1,587	399	1,284	364
1974 .....	3,747	1,600	425	1,323	399
1975 .....	3,994	1,673	477	1,389	455
1976 .....	3,871	1,614	419	1,412	426
1977 .....	3,942	1,608	426	1,458	450
1978 .....	3,918	1,564	428	1,461	465
1979 .....	3,993	1,577	427	1,501	486
1980 .....	4,114	1,615	436	1,550	513
Intermediate alternative projections <sup>1</sup>					
1981 .....	4,148	1,672	451	1,541	484
1982 .....	4,184	1,689	457	1,548	490
1983 .....	4,091	1,628	464	1,504	495
1984 .....	3,966	1,554	468	1,447	497
1985 .....	3,841	1,480	473	1,389	499
1986 .....	3,777	1,440	475	1,361	501
1987 .....	3,735	1,414	476	1,345	500
1988 .....	3,713	1,401	472	1,343	497
1989 .....	3,719	1,400	475	1,347	497
1990 .....	3,693	1,387	474	1,337	495
Low alternative projections <sup>1</sup>					
1981 .....	3,890	1,532	439	1,441	478
1982 .....	3,859	1,512	440	1,423	484
1983 .....	3,806	1,481	440	1,397	488
1984 .....	3,723	1,437	439	1,357	490
1985 .....	3,636	1,391	437	1,316	492
1986 .....	3,545	1,339	435	1,278	493
1987 .....	3,485	1,305	436	1,252	492
1988 .....	3,444	1,283	430	1,242	489
1989 .....	3,437	1,277	432	1,240	488
1990 .....	3,402	1,261	430	1,225	486
High alternative projections <sup>1</sup>					
1981 .....	4,185	1,646	459	1,552	528
1982 .....	4,261	1,666	470	1,566	559
1983 .....	4,327	1,674	483	1,580	590
1984 .....	4,351	1,666	493	1,574	618
1985 .....	4,372	1,655	504	1,567	646
1986 .....	4,381	1,634	512	1,561	674
1987 .....	4,408	1,626	519	1,564	699
1988 .....	4,460	1,634	520	1,586	720
1989 .....	4,547	1,656	529	1,618	744
1990 .....	4,603	1,670	533	1,634	766

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

Table 11B.—Undergraduate enrollment in public 2-year institutions, with alternative projections, by sex and attendance status:  
50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	2,102	682	573	386	461
1971 .....	2,365	746	642	448	529
1972 .....	2,640	750	737	500	653
1973 .....	2,888	793	800	545	750
1974 .....	3,284	833	941	586	924
1975 .....	3,832	989	1,106	674	1,063
1976 .....	3,746	857	1,059	703	1,127
1977 .....	3,900	805	1,098	739	1,258
1978 .....	3,868	738	1,082	700	1,348
1979 .....	4,054	739	1,122	728	1,466
1980 .....	4,327	811	1,152	784	1,580
Intermediate alternative projections <sup>1</sup>					
1981 .....	4,537	903	1,176	851	1,607
1982 .....	4,628	909	1,199	869	1,651
1983 .....	4,641	881	1,220	850	1,690
1984 .....	4,643	845	1,238	832	1,728
1985 .....	4,642	811	1,255	815	1,761
1986 .....	4,671	796	1,273	811	1,791
1987 .....	4,707	788	1,284	815	1,820
1988 .....	4,742	787	1,287	826	1,842
1989 .....	4,796	790	1,306	835	1,865
1990 .....	4,808	779	1,314	828	1,887
Low alternative projections <sup>1</sup>					
1981 .....	4,357	829	1,146	795	1,587
1982 .....	4,398	816	1,155	799	1,628
1983 .....	4,416	798	1,162	789	1,667
1984 .....	4,419	772	1,165	779	1,703
1985 .....	4,416	747	1,165	769	1,735
1986 .....	4,417	723	1,173	758	1,763
1987 .....	4,436	710	1,181	755	1,790
1988 .....	4,452	702	1,180	760	1,810
1989 .....	4,491	701	1,194	764	1,832
1990 .....	4,490	689	1,197	752	1,852
High alternative projections <sup>1</sup>					
1981 .....	4,710	896	1,201	860	1,753
1982 .....	4,904	903	1,236	880	1,885
1983 .....	5,088	905	1,273	893	2,017
1984 .....	5,259	897	1,307	903	2,152
1985 .....	5,429	890	1,339	916	2,284
1986 .....	5,600	883	1,374	927	2,416
1987 .....	5,781	884	1,403	944	2,550
1988 .....	5,961	893	1,421	972	2,675
1989 .....	6,165	906	1,457	999	2,803
1990 .....	6,325	907	1,481	1,006	2,931

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

**Table 11C.—Undergraduate enrollment in private 4-year institutions, with alternative projections, by sex and attendance status:  
50 States and D.C., fall 1970 to 1990**

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	1,627	754	196	541	136
1971 .....	1,616	745	185	551	135
1972 .....	1,604	726	180	559	139
1973 .....	1,615	710	189	566	150
1974 .....	1,648	717	192	577	162
1975 .....	1,719	750	193	595	181
1976 .....	1,680	725	167	616	172
1977 .....	1,732	728	170	645	189
1978 .....	1,743	719	167	661	195
1979 .....	1,791	724	170	686	211
1980 .....	1,835	732	170	712	222
Intermediate alternative projections <sup>1</sup>					
1981 .....	1,851	762	177	703	209
1982 .....	1,867	770	180	706	211
1983 .....	1,823	742	182	686	213
1984 .....	1,766	708	184	660	214
1985 .....	1,709	674	186	634	215
1986 .....	1,680	656	187	621	216
1987 .....	1,660	644	187	614	215
1988 .....	1,650	638	185	613	214
1989 .....	1,653	638	187	614	214
1990 .....	1,641	632	186	610	213
Low alternative projections <sup>1</sup>					
1981 .....	1,733	698	172	657	206
1982 .....	1,719	689	173	649	208
1983 .....	1,695	675	173	637	210
1984 .....	1,657	655	172	619	211
1985 .....	1,618	634	172	600	212
1986 .....	1,576	610	171	583	212
1987 .....	1,549	595	171	571	212
1988 .....	1,532	585	169	567	211
1989 .....	1,528	582	170	566	210
1990 .....	1,513	575	169	559	210
High alternative projections <sup>1</sup>					
1981 .....	1,865	750	180	708	227
1982 .....	1,899	759	185	714	241
1983 .....	1,928	763	190	721	254
1984 .....	1,937	759	194	718	266
1985 .....	1,945	754	198	715	278
1986 .....	1,947	744	201	712	290
1987 .....	1,960	741	204	714	301
1988 .....	1,982	744	204	724	310
1989 .....	2,021	755	208	738	320
1990 .....	2,046	761	209	746	330

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

Table 11D.—Undergraduate enrollment in private 2-year institutions, with alternative projections, by sex and attendance status:  
50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	121	49	14	48	10
1971 .....	120	48	13	48	11
1972 .....	114	43	13	47	11
1973 .....	124	45	15	50	14
1974 .....	119	41	16	49	13
1975 .....	134	47	22	52	13
1976 .....	132	46	15	57	14
1977 .....	140	47	14	63	16
1978 .....	155	48	15	72	20
1979 .....	159	48	14	76	22
1980 .....	197	68	15	90	24
Intermediate alternative projections <sup>1</sup>					
1981 .....	198	68	15	93	22
1982 .....	203	69	16	95	23
1983 .....	199	67	16	93	23
1984 .....	195	64	16	91	24
1985 .....	190	61	16	89	24
1986 .....	189	60	16	88	25
1987 .....	191	60	17	89	25
1988 .....	191	59	17	90	25
1989 .....	194	60	17	91	26
1990 .....	192	59	17	90	26
Low alternative projections <sup>1</sup>					
1981 .....	187	63	15	87	22
1982 .....	186	62	15	87	22
1983 .....	184	60	15	86	23
1984 .....	181	58	15	85	23
1985 .....	179	56	15	84	24
1986 .....	177	55	15	83	24
1987 .....	176	54	15	82	25
1988 .....	176	53	15	83	25
1989 .....	176	53	15	83	25
1990 .....	176	52	16	82	26
High alternative projections <sup>1</sup>					
1981 .....	202	68	16	94	24
1982 .....	206	68	16	96	26
1983 .....	210	68	17	97	28
1984 .....	213	68	17	98	30
1985 .....	215	67	17	100	31
1986 .....	219	67	18	101	33
1987 .....	223	67	18	103	35
1988 .....	228	67	18	106	37
1989 .....	235	68	19	109	39
1990 .....	237	68	19	110	40

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

Table 12.—Graduate enrollment in all institutions, with alternative projections, by sex and attendance status: 50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	1,031	264	366	115	285
1971 .....	1,012	269	346	119	277
1972 .....	1,066	268	358	126	313
1973 .....	1,123	273	375	137	340
1974 .....	1,190	276	387	151	375
1975 .....	1,263	290	410	163	400
1976 .....	1,333	287	427	176	443
1977 .....	1,318	289	411	183	434
1978 .....	1,319	284	404	189	443
1979 .....	1,309	280	389	196	444
1980 .....	1,343	281	394	204	466
* Intermediate alternative projections <sup>1</sup>					
1981 .....	1,408	298	423	217	470
1982 .....	1,431	302	429	224	476
1983 .....	1,448	301	435	230	482
1984 .....	1,462	300	441	235	486
1985 .....	1,469	297	444	238	490
1986 .....	1,474	297	443	240	494
1987 .....	1,470	290	443	242	495
1988 .....	1,470	286	451	240	493
1989 .....	1,447	279	436	239	493
1990 .....	1,437	276	433	238	490
Low alternative projections <sup>1</sup>					
1981 .....	1,338	268	409	198	463
1982 .....	1,343	266	409	199	469
1983 .....	1,343	259	409	200	475
1984 .....	1,339	255	407	198	479
1985 .....	1,331	247	404	197	483
1986 .....	1,320	240	399	195	486
1987 .....	1,307	234	396	191	486
1988 .....	1,302	227	404	187	484
1989 .....	1,272	219	388	182	483
1990 .....	1,259	215	384	178	482
High alternative projections <sup>1</sup>					
1981 .....	1,479	305	430	229	515
1982 .....	1,539	311	441	239	548
1983 .....	1,595	312	453	249	581
1984 .....	1,645	315	463	256	611
1985 .....	1,690	314	471	264	641
1986 .....	1,735	315	476	273	671
1987 .....	1,763	310	480	275	698
1988 .....	1,798	306	494	278	720
1989 .....	1,807	299	482	281	745
1990 .....	1,827	294	483	282	768

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

**Table 12A.—Graduate enrollment in public institutions, with alternative projections, by sex and attendance status: 50 States and D.C., fall 1970 to 1990**

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	724	175	248	81	220
1971 .....	712	183	232	83	213
1972 .....	757	182	245	87	243
1973 .....	799	185	257	95	263
1974 .....	852	189	265	106	292
1975 .....	906	198	283	114	311
1976 .....	932	190	287	120	334
1977 .....	900	190	267	124	319
1978 .....	894	183	258	127	326
1979 .....	884	182	245	133	324
1980 .....	901	180	246	137	337
Intermediate alternative projections <sup>1</sup>					
1981 .....	949	193	267	147	342
1982 .....	965	195	271	152	347
1983 .....	976	194	275	156	351
1984 .....	985	193	279	159	354
1985 .....	990	191	281	161	357
1986 .....	994	191	280	163	360
1987 .....	990	186	280	164	360
1988 .....	990	183	285	163	359
1989 .....	975	178	276	162	359
1990 .....	968	176	274	161	357
Low alternative projections <sup>1</sup>					
1981 .....	903	173	259	134	337
1982 .....	908	172	259	135	342
1983 .....	908	167	259	136	346
1984 .....	905	164	258	134	349
1985 .....	900	159	255	134	352
1986 .....	892	154	252	132	354
1987 .....	883	150	250	129	354
1988 .....	879	145	255	127	352
1989 .....	860	140	245	123	352
1990 .....	852	137	243	121	351
High alternative projections <sup>1</sup>					
1981 .....	999	197	272	155	375
1982 .....	1,041	201	279	162	399
1983 .....	1,079	201	286	169	423
1984 .....	1,115	203	293	174	445
1985 .....	1,146	202	298	179	467
1986 .....	1,177	202	301	185	489
1987 .....	1,197	199	304	186	508
1988 .....	1,220	196	312	188	524
1989 .....	1,229	191	305	190	543
1990 .....	1,244	188	306	191	559

<sup>1</sup> For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.



**Table 12B.—Graduate enrollment in private institutions, with alternative projections, by sex and attendance status: 50 States and D.C., fall 1970 to 1990**

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	307	89	118	34	65
1971 .....	300	86	114	36	64
1972 .....	308	86	113	39	70
1973 .....	324	88	118	42	77
1974 .....	338	87	122	45	83
1975 .....	357	92	127	49	89
1976 .....	401	97	140	56	109
1977 .....	416	98	144	59	115
1978 .....	425	101	146	62	117
1979 .....	425	98	144	63	119
1980 .....	442	100	147	67	128
Intermediate alternative projections <sup>1</sup>					
1981 .....	459	105	156	70	128
1982 .....	466	107	158	72	129
1983 .....	472	107	160	74	131
1984 .....	477	107	162	76	132
1985 .....	479	106	163	77	133
1986 .....	480	106	163	77	134
1987 .....	480	104	163	78	135
1988 .....	480	103	166	77	134
1989 .....	472	101	160	77	134
1990 .....	469	100	159	77	133
Low alternative projections <sup>1</sup>					
1981 .....	435	95	150	64	126
1982 .....	435	94	150	64	127
1983 .....	435	92	150	64	129
1984 .....	434	91	149	64	130
1985 .....	431	88	149	63	131
1986 .....	428	86	147	63	132
1987 .....	424	84	146	62	132
1988 .....	423	82	149	60	132
1989 .....	412	79	143	59	131
1990 .....	407	78	141	57	131
High alternative projections <sup>1</sup>					
1981 .....	480	108	158	74	140
1982 .....	498	110	162	77	149
1983 .....	516	111	167	80	158
1984 .....	530	112	170	82	166
1985 .....	544	112	173	85	174
1986 .....	558	113	175	88	182
1987 .....	566	111	176	89	190
1988 .....	578	110	182	90	196
1989 .....	578	108	177	91	202
1990 .....	583	106	177	91	209

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

**Table 13.—First-professional enrollment in all institutions, with alternative projections, by sex and attendance status: 50 States and D.C., fall 1970 to 1990**

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	175	144	17	13	1
1971 .....	194	160	15	17	2
1972 .....	207	168	15	21	3
1973 .....	218	171	14	30	3
1974 .....	236	179	15	38	4
1975 .....	245	177	18	42	8
1976 .....	251	175	20	50	6
1977 .....	251	173	18	53	7
1978 .....	257	175	17	58	7
1979 .....	263	176	17	63	7
1980 .....	278	181	18	70	9
Intermediate alternative projections <sup>1</sup>					
1981 .....	300	194	20	77	9
1982 .....	307	198	20	80	9
1983 .....	311	197	21	84	9
1984 .....	319	200	21	89	9
1985 .....	323	199	21	94	9
1986 .....	329	201	21	98	9
1987 .....	330	199	21	101	9
1988 .....	332	198	21	104	9
1989 .....	330	194	21	106	9
1990 .....	330	192	21	108	9
Low alternative projections <sup>1</sup>					
1981 .....	275	175	20	71	9
1982 .....	274	173	20	72	9
1983 .....	275	172	20	74	9
1984 .....	274	169	20	76	9
1985 .....	272	166	19	78	9
1986 .....	270	163	19	79	9
1987 .....	268	160	19	80	9
1988 .....	264	156	19	80	9
1989 .....	262	153	19	81	9
1990 .....	259	150	19	81	9
High alternative projections <sup>1</sup>					
1981 .....	312	200	21	82	9
1982 .....	319	203	21	85	10
1983 .....	329	206	21	92	10
1984 .....	340	209	22	98	11
1985 .....	348	210	22	105	11
1986 .....	357	213	22	110	12
1987 .....	362	211	23	115	13
1988 .....	367	210	24	120	13
1989 .....	368	206	23	125	14
1990 .....	371	206	23	128	14

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

**Table 13A.—First-professional enrollment in public institutions, with alternative projections, by sex and attendance status:  
50 States and D.C., fall 1970 to 1990**

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	76	66	4	6	0
1971 .....	86	73	4	8	1
1972 .....	91	76	3	10	2
1973 .....	97	79	2	15	1
1974 .....	105	81	4	19	1
1975 .....	105	76	6	19	4
1976 .....	105	76	5	23	1
1977 .....	103	74	4	24	1
1978 .....	105	75	3	26	1
1979 .....	106	74	3	28	1
1980 .....	114	78	3	32	2
Intermediate alternative projections <sup>1</sup>					
1981 .....	126	85	3	36	2
1982 .....	129	87	3	37	2
1983 .....	131	87	3	39	2
1984 .....	136	89	3	42	2
1985 .....	139	89	3	45	2
1986 .....	142	90	3	47	2
1987 .....	144	90	3	49	2
1988 .....	146	90	3	51	2
1989 .....	146	89	3	52	2
1990 .....	147	88	3	54	2
Low alternative projections <sup>1</sup>					
1981 .....	115	77	3	33	2
1982 .....	114	76	3	33	2
1983 .....	115	76	3	34	2
1984 .....	116	75	3	36	2
1985 .....	116	74	3	37	2
1986 .....	116	73	3	38	2
1987 .....	116	72	3	39	2
1988 .....	115	71	3	39	2
1989 .....	115	70	3	40	2
1990 .....	114	69	3	40	2
High alternative projections <sup>1</sup>					
1981 .....	131	88	3	38	2
1982 .....	133	89	3	39	2
1983 .....	139	91	3	43	2
1984 .....	144	93	3	46	2
1985 .....	149	94	3	50	2
1986 .....	154	96	3	53	2
1987 .....	157	95	3	56	3
1988 .....	161	95	4	59	3
1989 .....	162	94	3	62	3
1990 .....	164	94	3	64	3

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

Table 13B.—First-professional enrollment in private institutions, with alternative projections, by sex and attendance status:  
50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
1970 .....	99	78	13	7	1
1971 .....	108	87	11	9	1
1972 .....	116	92	12	11	1
1973 .....	121	92	12	15	2
1974 .....	131	98	11	19	3
1975 .....	140	101	12	23	4
1976 .....	146	99	15	27	5
1977 .....	148	99	15	30	5
1978 .....	152	100	15	32	6
1979 .....	157	102	14	35	6
1980 .....	163	104	15	38	7
Intermediate alternative projections <sup>1</sup>					
1981 .....	174	109	17	41	7
1982 .....	178	111	17	43	7
1983 .....	180	110	18	45	7
1984 .....	183	111	18	47	7
1985 .....	184	110	18	49	7
1986 .....	187	111	18	51	7
1987 .....	186	109	18	52	7
1988 .....	186	108	18	53	7
1989 .....	184	105	18	54	7
1990 .....	183	104	18	54	7
Low alternative projections <sup>1</sup>					
1981 .....	160	98	17	38	7
1982 .....	160	97	17	39	7
1983 .....	160	96	17	40	7
1984 .....	158	94	17	40	7
1985 .....	156	92	16	41	7
1986 .....	154	90	16	41	7
1987 .....	152	88	16	41	7
1988 .....	149	85	16	41	7
1989 .....	147	83	16	41	7
1990 .....	145	81	16	41	7
High alternative projections <sup>1</sup>					
1981 .....	181	112	18	44	7
1982 .....	186	114	18	46	8
1983 .....	190	115	18	49	8
1984 .....	196	116	19	52	9
1985 .....	199	116	19	55	9
1986 .....	203	117	19	57	10
1987 .....	205	116	20	59	10
1988 .....	206	115	20	61	10
1989 .....	206	112	20	63	11
1990 .....	207	112	20	64	11

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

**Table 14.—Full-time-equivalent enrollment in all institutions of higher education, by enrollment level of student and type of institution, with alternative projections: 50 States and D.C., 1970 to 1990**

(In thousands)

Year	Total	Undergraduate		Graduate		First-professional	
		4-year	2-year	4-year	2-year	4-year	2-year
1970 .....	6,737	4,458	1,518	599	0	163	0
1971 .....	7,149	4,632	1,719	613	0	185	0
1972 .....	7,254	4,587	1,847	622	0	198	0
1973 .....	7,453	4,560	2,014	669	0	210	0
1974 .....	7,805	4,670	2,199	710	0	226	0
1975 .....	8,481	4,914	2,579	756	2	229	0
1976 .....	8,313	4,838	2,461	780	1	234	2
1977 .....	8,415	4,919	2,479	775	1	240	0
1978 .....	8,735	4,899	2,409	776	1	249	0
1979 .....	8,487	4,990	2,470	777	1	250	0
1980 .....	8,749	5,108	2,589	791	0	261	0
Intermediate alternative projections <sup>1</sup>							
1981 .....	9,108	5,182	2,807	836	0	284	0
1982 .....	9,221	5,223	2,856	851	0	291	0
1983 .....	9,055	5,076	2,824	861	0	294	0
1984 .....	8,842	4,889	2,783	868	0	302	0
1985 .....	8,620	4,700	2,742	871	0	306	0
1986 .....	8,527	4,604	2,737	874	0	312	0
1987 .....	8,472	4,542	2,747	869	0	313	0
1988 .....	8,462	4,517	2,765	865	0	315	0
1989 .....	8,480	4,522	2,792	852	0	313	0
1990 .....	8,428	4,488	2,782	846	0	313	0
Low alternative projections <sup>1</sup>							
1981 .....	8,510	4,822	2,650	780	0	259	0
1982 .....	8,465	4,771	2,656	781	0	258	0
1983 .....	8,365	4,690	2,640	777	0	259	0
1984 .....	8,210	4,568	2,613	772	0	258	0
1985 .....	8,046	4,442	2,585	763	0	256	0
1986 .....	7,877	4,310	2,560	753	0	254	0
1987 .....	7,770	4,223	2,553	742	0	252	0
1988 .....	7,710	4,172	2,556	733	0	248	0
1989 .....	7,692	4,161	2,570	714	0	246	0
1990 .....	7,614	4,114	2,553	704	0	243	0
High alternative projections <sup>1</sup>							
1981 .....	9,221	5,187	2,865	874	0	295	0
1982 .....	9,414	5,260	2,947	906	0	302	0
1983 .....	9,578	5,316	3,018	933	0	312	0
1984 .....	9,669	5,316	3,075	957	0	321	0
1985 .....	9,752	5,311	3,134	978	0	329	0
1986 .....	9,821	5,290	3,193	1,000	0	338	0
1987 .....	9,917	5,302	3,265	1,009	0	342	0
1988 .....	10,074	5,357	3,351	1,020	0	346	0
1989 .....	10,269	5,454	3,447	1,021	0	347	0
1990 .....	10,392	5,512	3,505	1,025	0	350	0

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

**Table 14A.—Full-time-equivalent enrollment in public institutions of higher education, by enrollment level of student and type of institution, with alternative projections: 50 States and D.C., 1970 to 1990**

(In thousands)

Year	Total	Undergraduate		Graduate		First-professional	
		4-year	2-year	4-year	2-year	4-year	2-year
1970 .....	4,953	3,053	1,413	414	0	73	0
1971 .....	5,344	3,219	1,613	427	0	85	0
1972 .....	5,453	3,187	1,747	431	0	88	0
1973 .....	5,630	3,158	1,909	467	0	96	0
1974 .....	5,945	3,245	2,097	501	0	102	0
1975 .....	6,523	3,428	2,465	530	2	98	0
1976 .....	6,350	3,369	2,348	534	1	99	2
1977 .....	6,396	3,416	2,356	522	1	101	0
1978 .....	6,270	3,372	2,277	516	1	103	0
1979 .....	6,393	3,438	2,332	517	1	104	0
1980 .....	6,574	3,524	2,416	524	0	111	0
Intermediate alternative projections <sup>1</sup>							
1981 .....	6,885	3,574	2,631	556	0	123	0
1982 .....	6,972	3,603	2,677	566	0	126	0
1983 .....	6,852	3,503	2,649	572	0	128	0
1984 .....	6,696	3,374	2,612	577	0	133	0
1985 .....	6,536	3,245	2,577	578	0	136	0
1986 .....	6,472	3,178	2,573	581	0	139	0
1987 .....	6,436	3,136	2,582	577	0	141	0
1988 .....	6,436	3,119	2,600	574	0	143	0
1989 .....	6,456	3,123	2,625	565	0	143	0
1990 .....	6,420	3,099	2,616	561	0	144	0
Low alternative projections <sup>1</sup>							
1981 .....	6,444	3,328	2,486	518	0	112	0
1982 .....	6,416	3,292	2,492	520	0	111	0
1983 .....	6,346	3,237	2,479	518	0	112	0
1984 .....	6,235	3,153	2,455	513	0	113	0
1985 .....	6,118	3,066	2,430	508	0	113	0
1986 .....	5,997	2,976	2,407	501	0	113	0
1987 .....	5,924	2,916	2,402	493	0	113	0
1988 .....	5,885	2,880	2,405	487	0	112	0
1989 .....	5,879	2,873	2,419	475	0	112	0
1990 .....	5,823	2,840	2,402	469	0	111	0
High alternative projections <sup>1</sup>							
1981 .....	6,977	3,580	2,687	581	0	128	0
1982 .....	7,131	3,630	2,767	603	0	130	0
1983 .....	7,262	3,669	2,835	621	0	136	0
1984 .....	7,340	3,670	2,891	639	0	141	0
1985 .....	7,414	3,667	2,948	652	0	146	0
1986 .....	7,477	3,654	3,005	667	0	151	0
1987 .....	7,562	3,661	3,074	673	0	154	0
1988 .....	7,694	3,699	3,156	681	0	157	0
1989 .....	7,855	3,766	3,248	682	0	159	0
1990 .....	7,957	3,806	3,304	686	0	161	0

<sup>1</sup> For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

**Table 14B.—Full-time-equivalent enrollment in private institutions of higher education, by enrollment level of student and type of institution, with alternative projections: 50 States and D.C., 1970 to 1990**

(In thousands)

Year	Total	Undergraduate		Graduate		First-professional	
		4-year	2-year	4-year	2-year	4-year	2-year
1970 .....	1,784	1,407	105	184	0	89	0
1971 .....	1,804	1,412	106	186	0	100	0
1972 .....	1,801	1,400	100	191	0	110	0
1973 .....	1,824	1,403	106	201	0	114	0
1974 .....	1,861	1,425	102	208	0	124	0
1975 .....	1,958	1,486	114	226	0	131	0
1976 .....	1,963	1,469	113	246	0	135	0
1977 .....	2,018	1,503	123	253	0	139	0
1978 .....	2,066	1,527	133	258	0	146	0
1979 .....	2,095	1,552	137	259	0	146	0
1980 .....	2,175	1,586	172	267	0	150	0
Intermediate alternative projections <sup>1</sup>							
1981 .....	2,223	1,607	175	280	0	160	0
1982 .....	2,249	1,620	179	285	0	164	0
1983 .....	2,203	1,573	175	289	0	166	0
1984 .....	2,146	1,515	170	292	0	169	0
1985 .....	2,083	1,456	165	293	0	170	0
1986 .....	2,055	1,425	164	293	0	173	0
1987 .....	2,035	1,406	165	292	0	172	0
1988 .....	2,026	1,398	165	291	0	172	0
1989 .....	2,024	1,400	168	287	0	170	0
1990 .....	2,008	1,389	166	285	0	169	0
Low alternative projections <sup>1</sup>							
1981 .....	2,066	1,494	164	261	0	146	0
1982 .....	2,048	1,478	163	261	0	146	0
1983 .....	2,019	1,453	161	259	0	146	0
1984 .....	1,975	1,415	158	258	0	144	0
1985 .....	1,928	1,375	155	255	0	143	0
1986 .....	1,880	1,334	153	252	0	141	0
1987 .....	1,833	1,307	151	249	0	139	0
1988 .....	1,825	1,292	151	246	0	136	0
1989 .....	1,813	1,288	151	239	0	134	0
1990 .....	1,791	1,274	150	236	0	132	0
High alternative projections <sup>1</sup>							
1981 .....	2,244	1,608	177	292	0	167	0
1982 .....	2,283	1,630	180	302	0	171	0
1983 .....	2,316	1,648	182	311	0	175	0
1984 .....	2,329	1,646	184	318	0	180	0
1985 .....	2,338	1,644	185	325	0	183	0
1986 .....	2,344	1,637	188	333	0	186	0
1987 .....	2,355	1,641	190	335	0	188	0
1988 .....	2,380	1,657	194	340	0	189	0
1989 .....	2,414	1,687	199	339	0	188	0
1990 .....	2,435	1,706	201	340	0	189	0

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

# Chapter III

## HIGH SCHOOL GRADUATES AND EARNED DEGREES

### High School Graduates and Equivalency Credentials and Earned Degrees

Over the next decade, the number of regular high school graduates is expected to be fewer as the 18-year-old population<sup>1</sup> declines 6, 20 percent. In contrast, recipients of high school equivalency credentials are projected to increase 24 percent as more and more persons of all ages see this certificate as an acceptable alternative to a regular high school diploma.

Total degree recipients (bachelor's, master's and first-professional) are projected to remain fairly stable during the 1980's, even though the number of 18-year-olds is expected to decrease throughout most of the decade and the traditional college-age population (18-24 years old) is expected to drop. Declines in the number of bachelor's degrees are expected to be offset by increases in advanced degrees awarded to women. In addition, with first-year undergraduate enrollment growing as unemployment levels rise, the number of bachelor's degrees is expected to increase in the first half of the decade.

### High School Graduates and Equivalency Credentials

The number of regular high school graduates increased from 2.9 million in 1969-70 to 3.2 million 1976-77. When the low birth cohorts of the 1960's moved into secondary schools in the late 1970's, this number decreased slightly to 3.1 million in 1979-80 (table 15). As the 18-year old population decreases for most of the next decade, regular high school graduates are projected to decrease to 2.4 million in 1990-91 (figure 24). The slight increases shown

in table 15 for 1986-87 and 1987-88 are due to small increases in the number of annual births from 1969 to 1971.

Although projections of high school graduates are expected to decrease from 1979-80 to 1990-91, all of the decrease is expected to occur in public high schools. Graduates of public high schools are projected to decrease nearly 26 percent, from 2.8 million to 2.0 million. At the same time, graduates of private high schools are projected to remain unchanged at 300,000, reflecting the constant enrollment projected for these schools in table 7.

Additional decreases in the number of high school graduates could occur if students who might otherwise graduate cannot pass the minimal competency tests. Ten States instituted such tests between 1976 and 1980, while 5 other States plan to begin using these tests within the next few years<sup>2</sup>. However, the effects of using these tests are not yet clear.

The numbers of graduates cited earlier do not include the estimates and projections of high school equivalency credentials for the 50 States and the District of Columbia. The number of these credentials (converted to school year for this report) increased from 238,000 in 1971-72 to 453,000 in 1979-80<sup>3</sup> (figure 25), an increase of 90 percent. This great gain came at a time when high school graduates as a percent of the 18-year old population declined slightly from 75.4 percent in 1972-73 to 73.6 percent in 1979-80.

This slight decline in the proportion of the population graduating from a regular high school has been more than offset by the increase in high school equivalency credentials, more than 65 percent of which are granted to students under 25 years old. As a result, the proportion of the

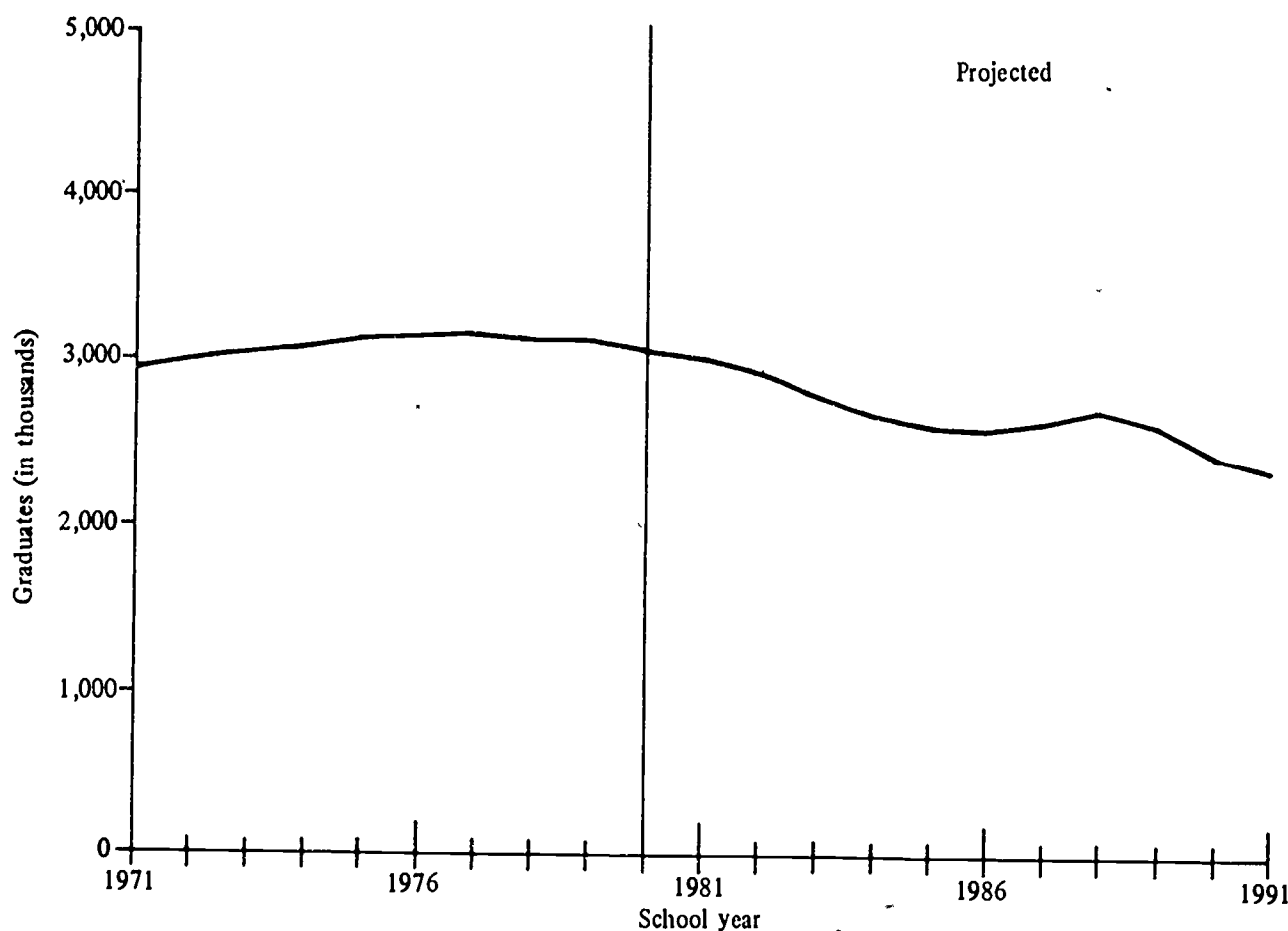
<sup>1</sup>The number of 18-year-olds at their nearest birthday was computed as the average of the 17- and 18-year-old population.

<sup>2</sup>Education Commission of the States, "State Activity, Minimal Competency Testings," 1980.

<sup>3</sup>Counts of high school equivalency credentials are collected by the American Council on Education. By calendar year, this number increased from 246,000 in 1972 to 479,000 in 1980.



Figure 24.—High school graduates, with projections: 50 States and D.C., fall 1970 to 1990



population 20 to 24 years old who have completed at least 4-years of high school or its equivalent has increased from 82.8 percent in 1972 to 83.8 percent in 1980<sup>4</sup>.

In addition to the slight increase in the propensity of younger students to earn equivalency credentials rather than regular high school diplomas, many older adults are choosing this certificate to further their education for personal and job-related reasons<sup>5</sup>. From 1972 to 1980, the number of certificates earned by adults 25 years old and over has increased from 122,000 to 159,000.

During the next 10 years, the number of high school equivalency credentials is expected to increase from 453,000 in 1979-80 to 560,000 in 1990-91, an increase of 23.6 percent. The increase over the projection period is ex-

pected to be smaller than the increase during the 1970's because pools of persons not obtaining a high school diploma are expected to decline along with the 18-year-old population.

## Earned Degrees

The total number of earned degrees increased from 1.06 million in 1969-70 to 1.33 million in 1979-80, an increase of 24.8 percent. By 1990-91, this number is expected to increase slightly above 1.33 million, an increase of less than 1 percent as advanced degrees earned by women offset, to a large extent, drops in bachelor's and master's degrees (figure 26). These reductions are anticipated because fewer traditional college-age students are expected to enroll full-time as a result of the population declines in this group. Between 1969-70 and 1979-80, women made substantial gains in the number of degrees earned. This number increased by 46.7 percent, from 429,703 to 603,238, while total earned degrees for men increased 10 percent, from 635,688 to

<sup>4</sup>U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Educational Attainment: March, 1972," Series P-20, No. 243, November 1972 and unpublished tabulations.

<sup>5</sup>American Council on Education, *Who Takes the GED Test? A National Survey of Spring 1980 Examinees*, March 1980.

700,059. Projections show that the total number of degrees earned by men is expected to drop to 673,600 by 1990-91 as total degrees decrease for all levels. In contrast, projections of total degrees for women are expected to increase to 659,100 by 1990-91 as significant increases are projected at the doctor's and first-professional levels.

## Bachelor's Degrees

The number of bachelor's degrees increased from 792,656 in 1969-70 to 945,776 in 1973-74. This number then decreased to 921,204 in 1977-78 before rising again to 929,417 in 1979-80. Thereafter, bachelor's degrees are projected to increase to 985,000 by 1984-85 and then decrease to 922,000 in 1990-91.

During the early 1980's, bachelor's degrees are expected to increase because of the rise in full-time undergraduate enrollment of first-year students 4 years earlier. From 1976 to 1980, this number increased nearly 10 percent, from 1.4 million to 1.6 million, despite decreases in the number of 18-year-olds (figure 27). This increase in first-year enrollment is attributed to a lack of job opportunities in an

economy marked by high unemployment rates. As the economy continues to worsen during 1981, first-year enrollments may continue to rise. In fact, preliminary estimates of college enrollment in 4-year institutions for 1981 already show an increase of nearly 2 percent over the 1980 level. Thus, increases in first-year enrollment are expected to lead to a short-term growth in bachelor's degrees.

However, in the late 1980's, bachelor's degrees are expected to decline as the 18- to 24-year-old population decreases at the end of the decade. The decline will apply to both men and women, a change from past trends in which bachelor's degrees awarded to men and women have taken different paths. For instance, the number of degrees awarded to men increased from 451,380 in 1969-70 to 527,313 in 1973-74 and then decreased to 473,611 in 1979-80. On the other hand, the number of degrees awarded to women increased continuously, from 341,276 in 1969-70 to 455,806 in 1979-80. Over the projection period, bachelor's degrees awarded to men are expected to continue decreasing to 470,000 in 1980-81, then increase gradually to 485,000 by 1983-84 before declining to 452,000 by 1990-91. Bachelor's degrees awarded to women, however, are ex-

Figure 25.—High school equivalency credentials, with projections: 50 States and D.C., 1972 to 1990

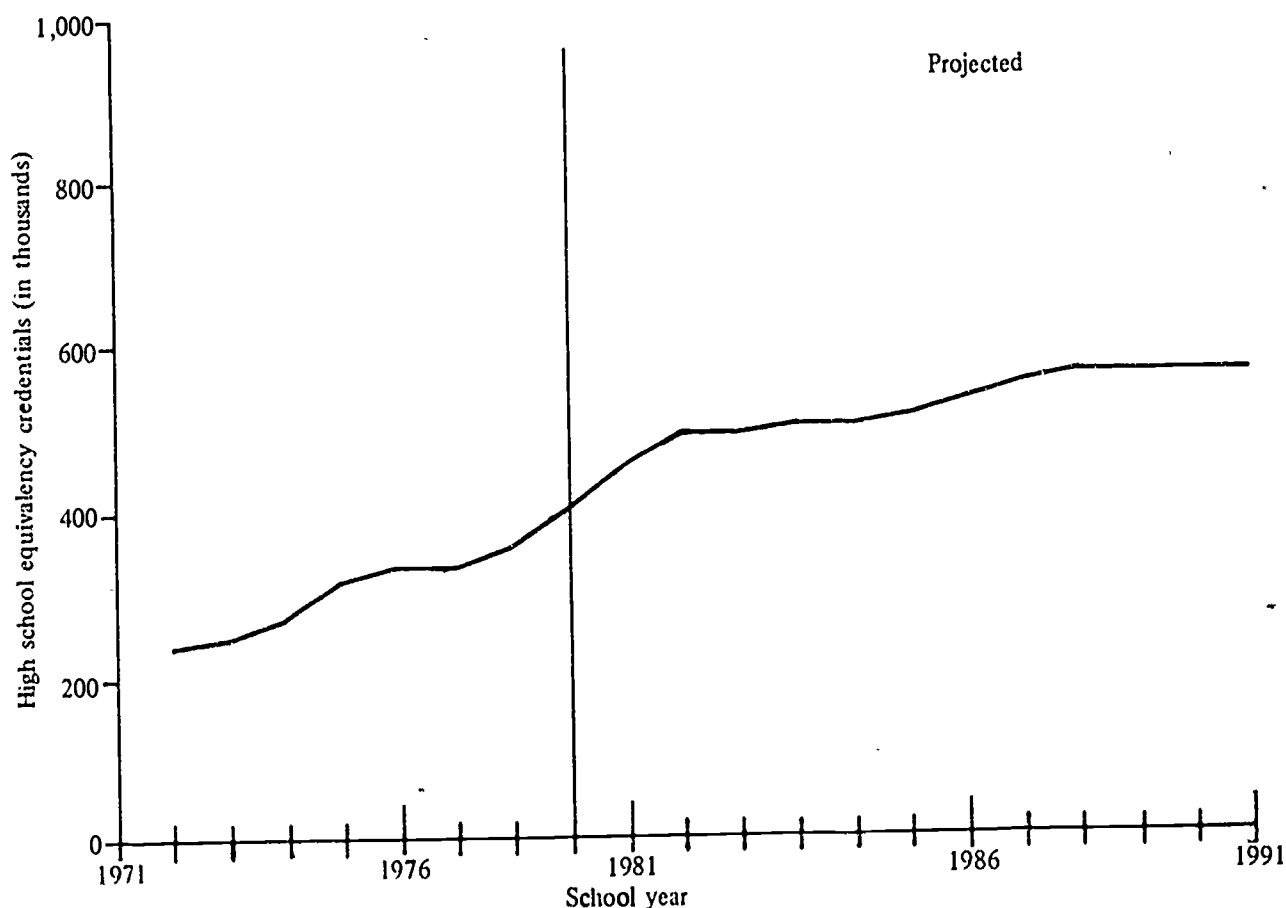
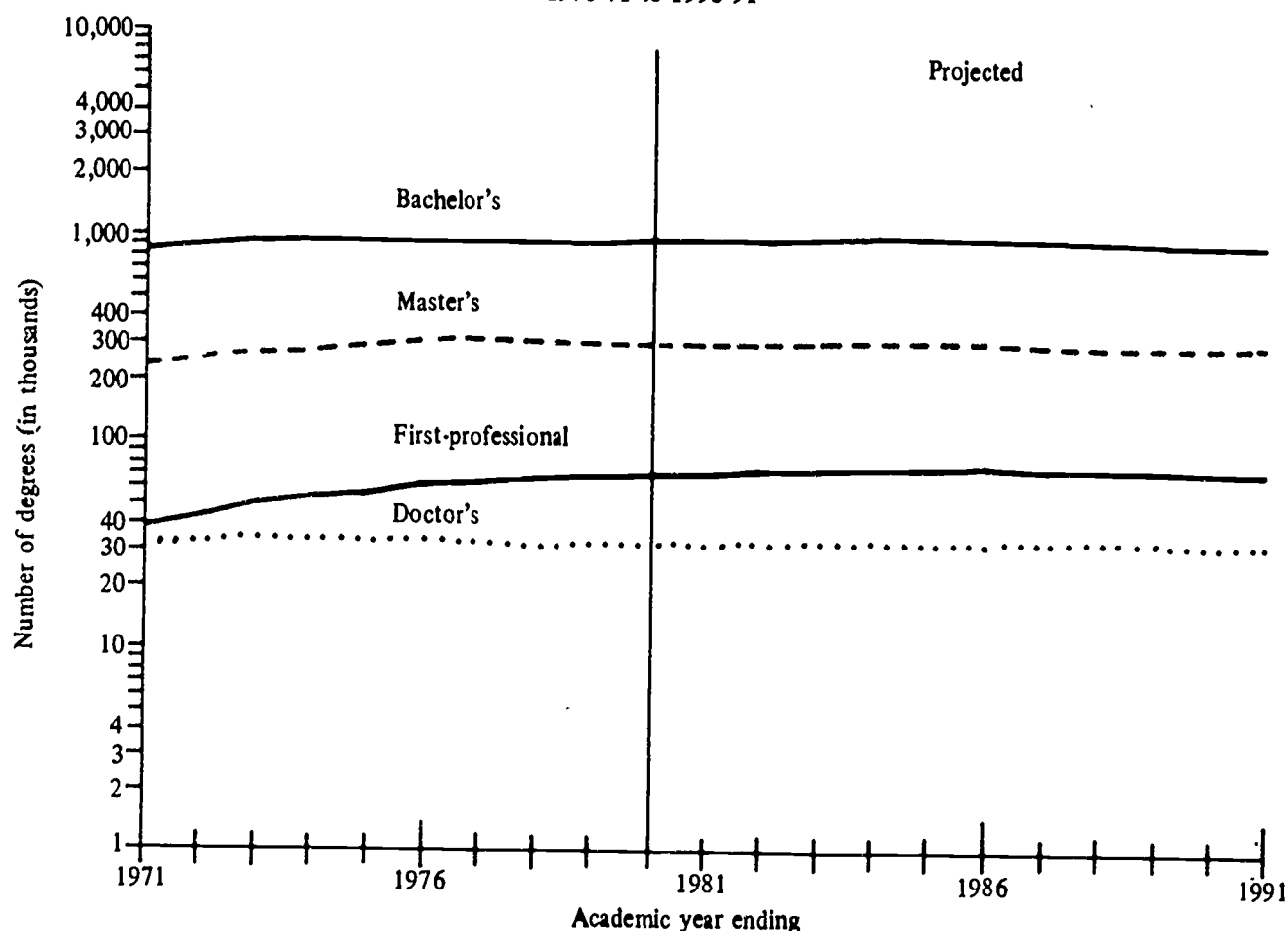


Figure 26.—Earned degrees, with intermediate alternative projections: 50 States and D.C., 1970-71 to 1990-91



pected to continue increasing to 509,000 by 1985-86 before declining to 470,000 in 1990-91 (figure 28).

## Master's Degrees

Over the 10-year period from 1969-70 to 1979-80, master's degrees increased by about 90,000, from 208,291 to 298,081. Of this increase, only slightly more than 25,000 degrees were due to an increase in the number of degrees earned by men, from 125,624 to 150,749, while 65,000 degrees were due to gains by women, from 82,667 to 147,332 (figure 29). Total master's degrees are expected to increase to 311,000 by 1984-85 before declining to 303,000 in 1990-91. The number of degrees awarded to men is expected to increase slightly to 151,000 by 1990-91, while the number of degrees awarded to women is expected to increase to 152,000. During the projection period, master's degrees conferred to men and women are expected to fluctuate,

since the number of degrees earned by both sexes has fallen in recent years, even though bachelor's degrees for women have continued to increase. A reason for this phenomenon is that the number of degrees in education for women has declined since 1977-78. This is important because, throughout the last decade, education degrees for women have represented 50 percent or more of all master's degrees earned by women. Master's degrees awarded to men, on the other hand, have fluctuated in recent years because of declines in full-time and part-time graduate enrollment.

However, as the job market for teachers improves, the number of bachelor's degrees is expected to increase at the end of the decade. This should occur as the increased demand for additional teachers draws college students back into education, resulting in increases in the supply of new teacher graduates. As a result, master's degrees earned by men and women are expected to increase slightly by the end of the decade.

## Doctor's Degrees

The number of doctor's degrees increased from 29,866 in 1969-70 to 32,615 in 1979-80, and is expected to rise to 33,400 by 1990-91, a slight increase above its 1980 level. Between 1969-70 and 1979-80, women made great gains, while men incurred slight losses (figure 30). During this period, the number of doctor's degrees awarded to men decreased from 25,890 to 22,943, while the number of doctor's degrees awarded to women increased from 3,976 to 9,672. Degrees awarded to men are projected to decline from 22,943 in 1979-80 to 18,400 in 1990-91, and degrees awarded to women are projected to increase from 9,672 to 15,000. In fact, increases in degrees for women are expected to offset projected declines for men, thus allowing for the slight increase in total doctor's degrees over the projection period.

Increases in advanced degrees for women have occurred at a time when graduate enrollment has increased, particularly for women. Between 1970 and 1980, graduate enrollment increased from 1,031,000 to 1,343,000, a climb of nearly 312,000. Of this increase, 87 percent was due to gains by women. Also, in 1980, nearly 50 percent of

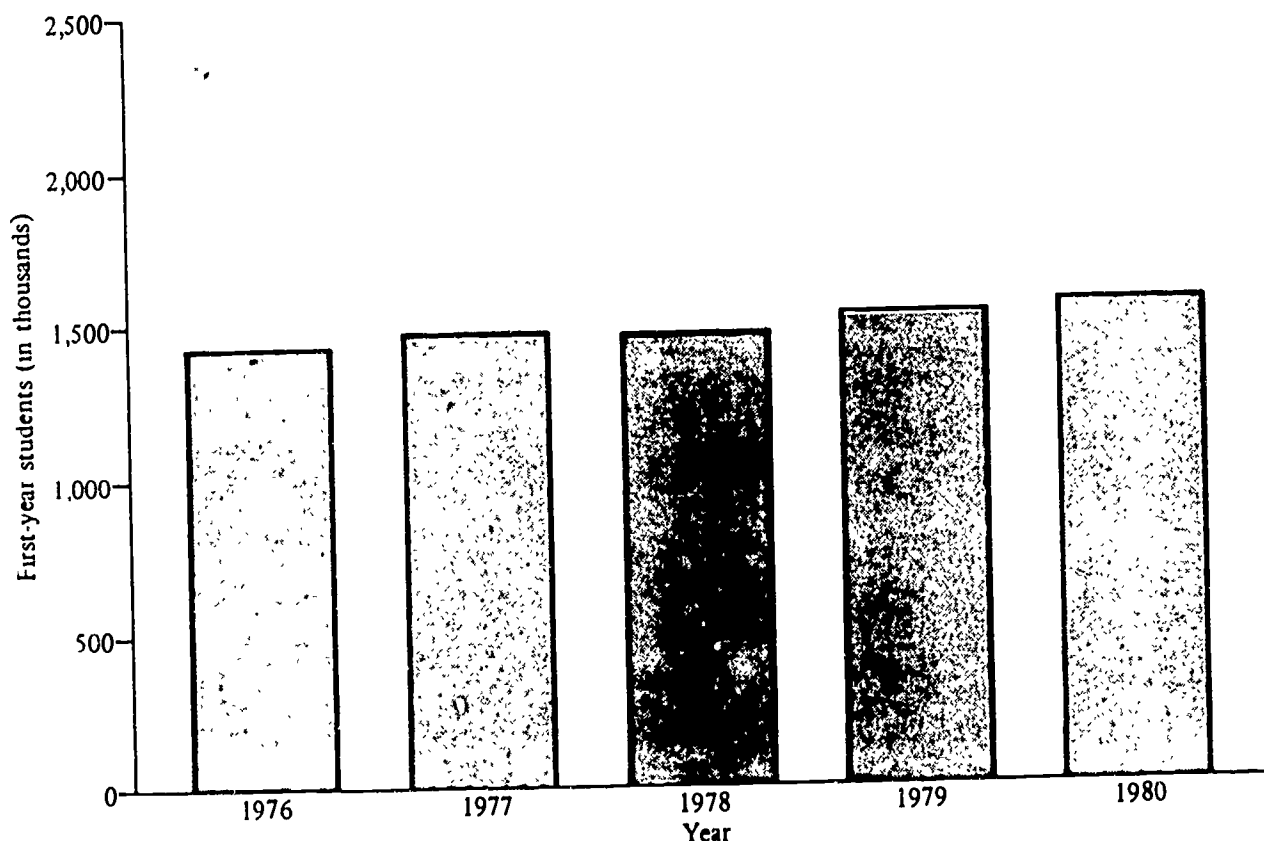
graduate enrollment was female, and unlike graduate enrollment for men, which has declined, graduate enrollment for women has increased. Thus, if present trends continue, increases in doctor's degrees for women and possibly declines for men are foreseen by the end of the decade.

## First-Professional Degrees

First-professional degrees increased from 34,578 in 1969-70 to 70,184 in 1979-80, a jump of 103 percent. Projections show that first-professional degrees are expected to increase by 5.8 percent to 74,300 by 1990-91. This slight increase will be largely due to the continuation of rapid rises in the number awarded to women, which has increased from 1,784 in 1969-70 to 17,428 in 1979-80 (figure 31). Projections show this increase continuing to 22,100 in 1990-91. For men, first-professional degrees increased from 32,794 in 1969-70 to 52,756 in 1979-80. Decreases in the future are expected to be slight, declining to 52,200 in 1990-91.

In terms of the percentage of total first-professional degrees, women, who have increased their percentage dur-

Figure 27.—Full-time undergraduates enrollment of first-year students in 4-year institutions: 50 States and D.C., fall 1976 to 1980



ing the 1970's, are expected to further increase their percentage in the 1980's. Women represented 5.2 percent of all first-professional degrees in 1969-70. In 1979-80, this

percentage increased to 24.8 percent. By 1990-91, this percentage is expected to continue to increase to 29.7 percent.

Figure 28.—Earned bachelor's degrees, with intermediate alternative projections, by sex: 50 States and D.C., 1970-71 to 1990-91

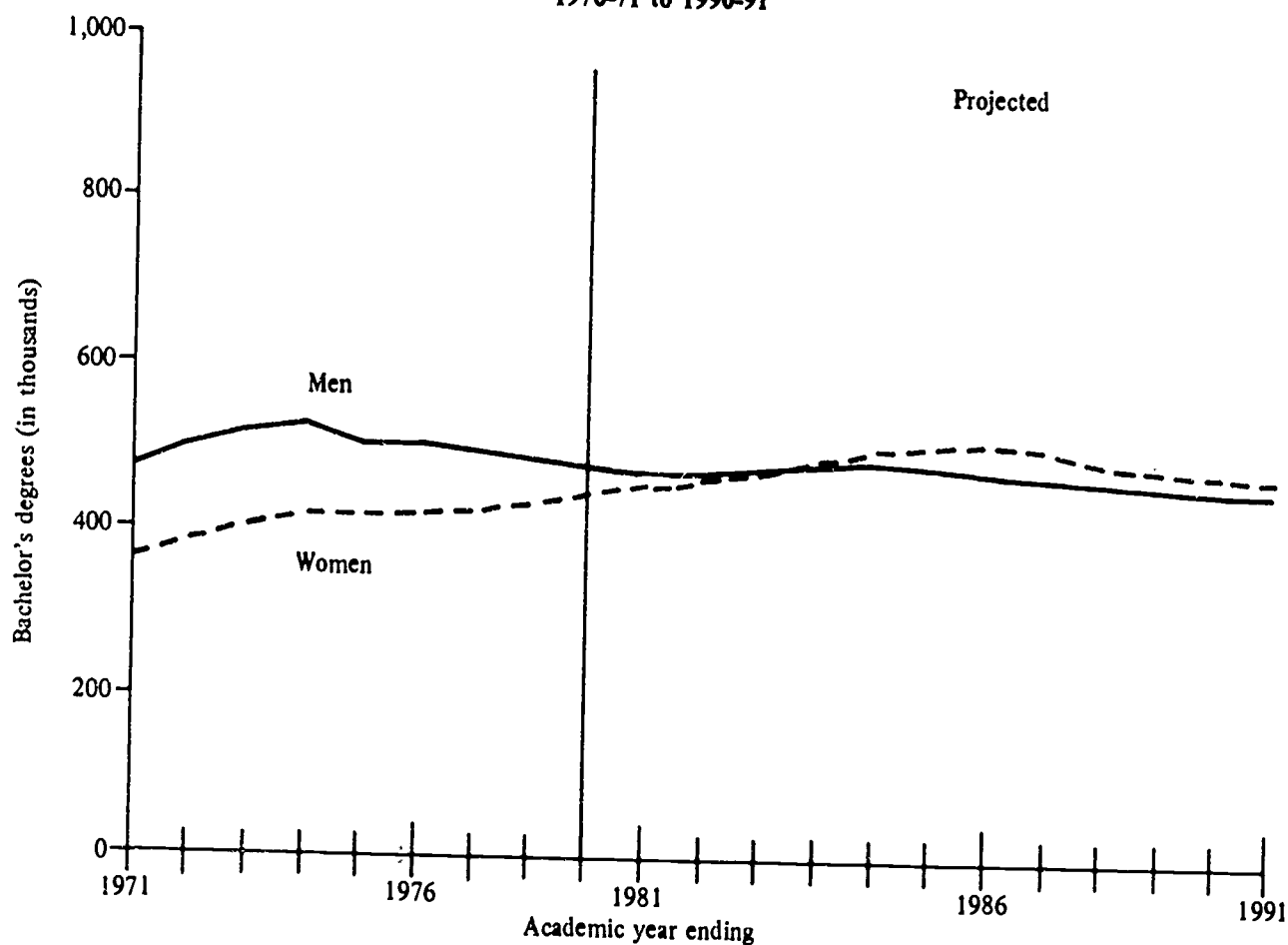


Figure 29.—Earned master's degrees, with intermediate alternative projections, by sex: 50 States and D.C., 1970-71 to 1990-91

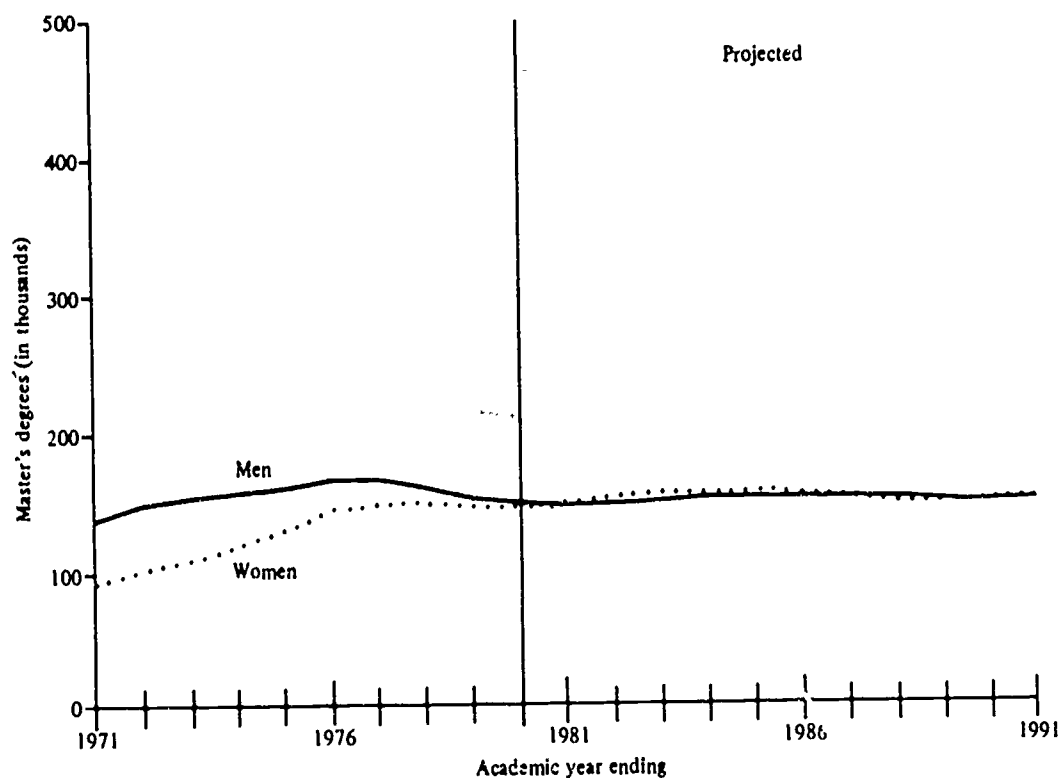


Figure 30.—Earned doctor's degrees, with intermediate alternative projections, by sex: 50 States and D.C., 1970-71 to 1990-91

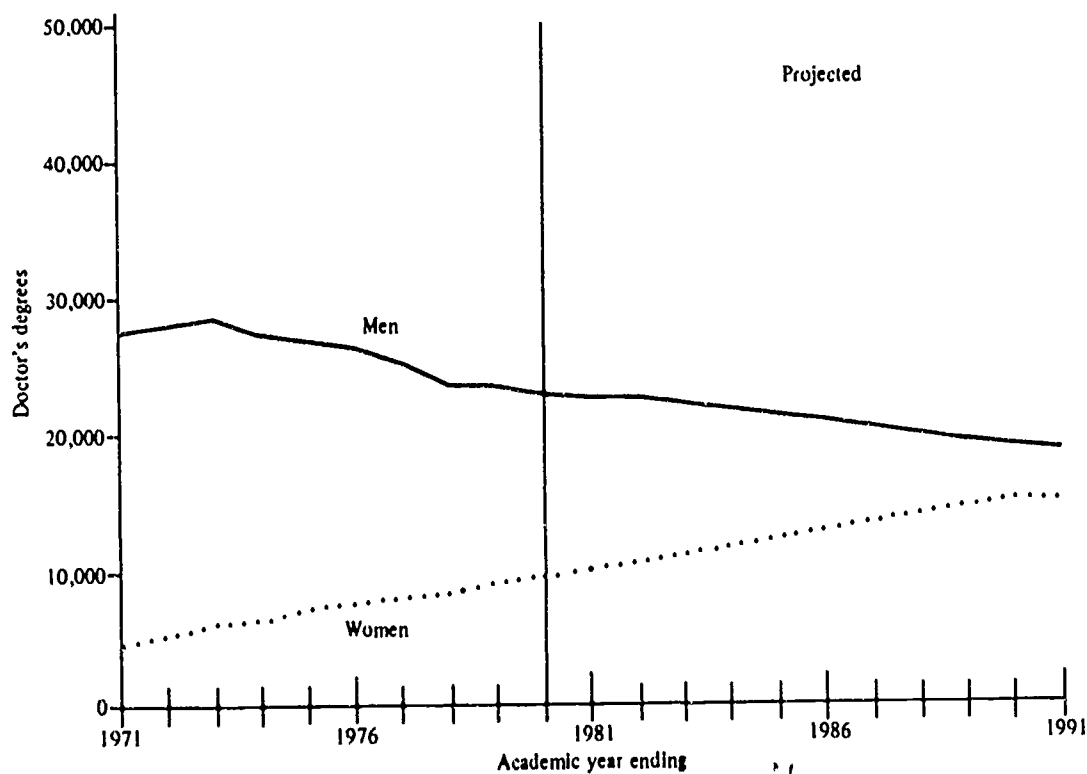
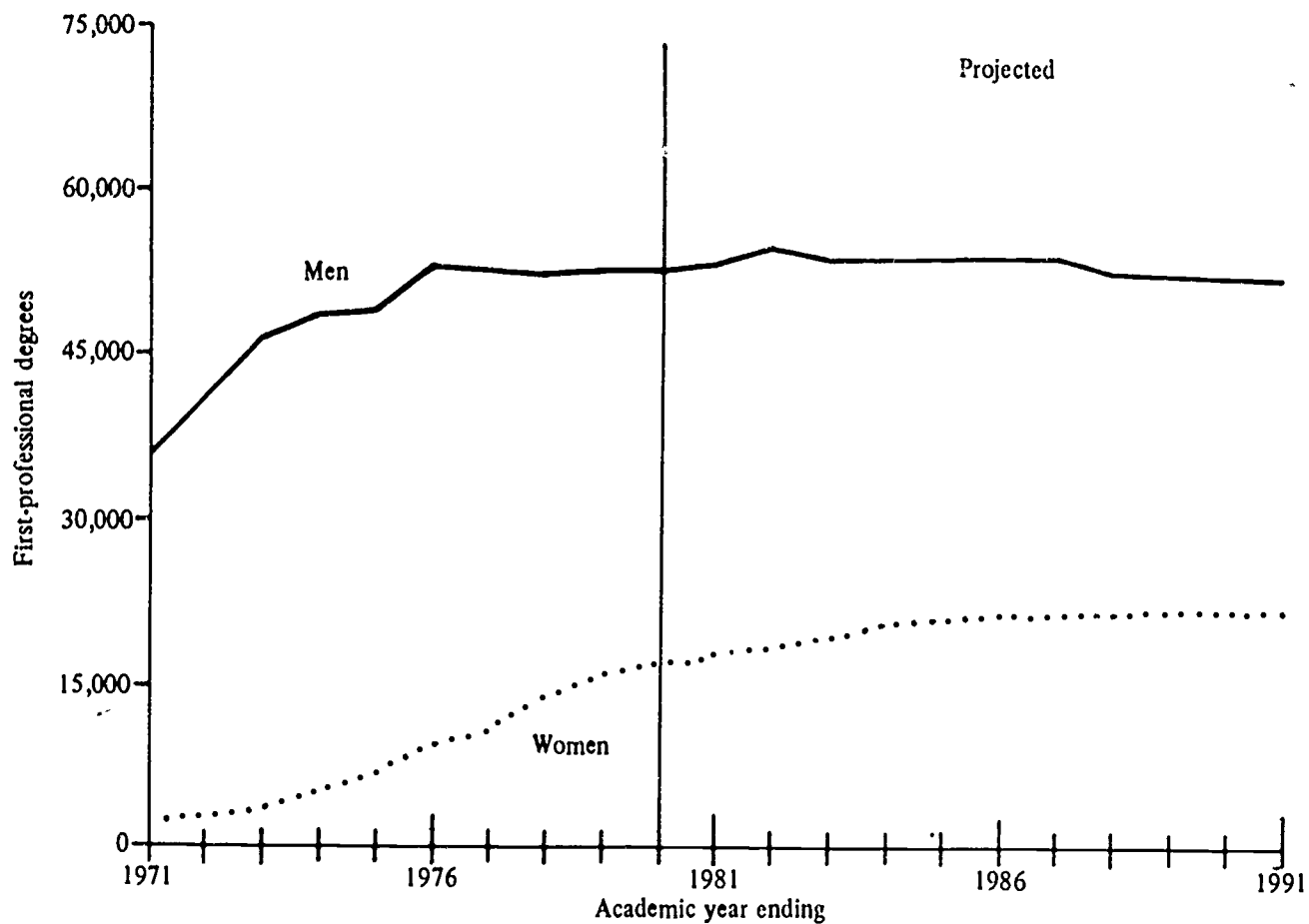


Figure 31.—Earned first-professional degrees, with intermediate alternative projections, by sex.  
50 States and D.C., 1970-71 to 1990-91



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Table 15.—High school graduates and equivalency credentials, with projections. 50 States and D.C., 1969-70 to 1990-91  
(In thousands)

Year	Total high school graduates (excluding high school equivalency credentials)	Sex		Control		High school equivalency credentials <sup>1</sup>
		Boys	Girls	Public	Private (estimated)	
1969-70 .....	2,896	1,433	1,463	2,596	300	—
1970-71 .....	2,944	1,457	1,487	2,644	300	—
1971-72 .....	3,008	1,490	1,518	2,706	302	238
1972-73 .....	3,043	1,503	1,540	2,737	306	248
1973-74 .....	3,080	1,515	1,565	2,771	310	272
1974-75 .....	3,140	1,545	1,595	2,830	310	317
1975-76 .....	3,155	1,554	1,601	2,844	311	335
1976-77 .....	3,161	1,550	1,611	2,846	315	333
1977-78 .....	3,134 <sup>2</sup>	1,534	1,600	2,832	302	357
1978-79 .....	3,124	1,526	1,598	2,824	300	403
1979-80 .....	3,063	1,502	1,561	2,764	299	453
Projected <sup>3</sup>						
1980-81 .....	3,021	1,480	1,541	2,721	300	490
1981-82 .....	2,937	1,438	1,499	2,637	300	490
1982-83 .....	2,795	1,368	1,427	2,495	300	500
1983-84 .....	2,680	1,312	1,368	2,380	300	500
1984-85 .....	2,614	1,280	1,334	2,314	300	510
1985-86 .....	2,599	1,273	1,326	2,299	300	530
1986-87 .....	2,648	1,297	1,351	2,348	300	550
1987-88 .....	2,710	1,330	1,380	2,410	300	560
1988-89 .....	2,626	1,289	1,337	2,326	300	560
1989-90 .....	2,444	1,199	1,245	2,144	300	560
1990-91 .....	2,350	1,154	1,196	2,050	300	560

<sup>1</sup>Numbers are adjusted to reflect school year.

<sup>2</sup>Revised.

<sup>3</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

*dary Day Schools; (2) Statistics of Nonpublic and Elementary and Secondary Day Schools; (3) Selected Public and Private Elementary and Secondary Education Statistics, October 1979; (4) unpublished NCES tabulations; and American Council on Education, GED Annual Statistical Report, Washington, D.C., 1980.*

NOTE.—Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, (1) *Statistics of Public Elementary and Sec-*



Table 16.—Earned degrees, with alternative projections, by level and sex of students. 50 States and D.C., 1969-70 to 1990-91

Year	Bachelor's			Master's			Doctor's (except first-professional)			First-professional		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
1969-70 . . .	792,656	451,380	341,276	208,291	125,624	82,667	29,866	25,890	3,976	34,578	32,794	1,784
1970-71 . . .	839,730	475,594	364,136	230,509	138,146	92,363	32,107	27,530	4,577	37,946	35,544	2,402
1971-72 . . .	887,273	500,590	386,683	251,633	149,550	102,083	33,363	28,090	5,273	43,411	40,723	2,688
1972-73 . . .	922,362	518,191	404,171	263,371	154,468	108,903	34,777	28,571	6,206	50,018	46,489	3,529
1973-74 . . .	945,776	527,313	418,463	277,033	157,842	119,191	33,816	27,365	6,451	53,816	48,530	5,286
1974-75 . . .	922,933	504,841	418,092	292,450	161,570	130,880	34,083	26,217	7,266	55,916	48,956	6,960
1975-76 . . .	925,746	504,925	420,821	311,771	167,248	144,523	34,064	26,267	7,797	62,649	52,892	9,757
1976-77 . . .	919,549	495,545	424,004	317,164	167,783	149,381	33,232	25,142	8,090	63,359	52,374	10,985
1977-78 . . .	921,204	487,347	433,857	311,620	161,212	150,408	32,131	23,658	8,473	66,581	52,270	14,311
1978-79 . . .	921,390	477,344	444,046	301,079	153,370	147,709	32,730	23,541	9,189	68,848	52,652	16,196
1979-80 . . .	929,417	473,611	455,806	298,081	150,749	147,332	32,615	22,943	9,672	70,184	52,756	17,428
Intermediate alternative projections <sup>1</sup>												
1980-81 . . .	932,000	470,000	462,000	298,000	148,000	150,000	32,900	22,700	10,200	71,700	53,500	18,200
1981-82 . . .	945,000	475,000	470,000	303,000	149,000	154,000	33,300	22,600	10,700	73,600	54,700	18,900
1982-83 . . .	965,000	480,000	485,000	307,000	151,000	156,000	33,300	22,100	11,200	73,400	53,700	19,700
1983-84 . . .	985,000	485,000	500,000	310,000	154,000	156,000	33,500	21,700	11,800	74,600	53,800	20,800
1984-85 . . .	985,000	480,000	505,000	311,000	153,000	158,000	33,600	21,200	12,400	75,300	53,900	21,400
1985-86 . . .	981,000	472,000	509,000	309,000	153,000	156,000	33,700	20,800	12,900	75,900	54,100	21,800
1986-87 . . .	970,000	468,000	502,000	306,000	153,000	153,000	33,800	20,300	13,500	75,800	53,900	21,900
1987-88 . . .	949,000	462,000	487,000	301,000	152,000	149,000	33,800	19,800	14,000	74,600	52,600	22,000
1988-89 . . .	938,000	458,000	480,000	300,000	150,000	150,000	33,900	19,300	14,600	74,600	52,500	22,100
1989-90 . . .	930,000	455,000	475,000	301,000	150,000	151,000	33,800	18,800	15,000	74,400	52,300	22,100
1990-91 . . .	922,000	452,000	470,000	303,000	151,000	152,000	33,400	18,400	15,000	74,300	52,200	22,100
Low alternative projections <sup>1</sup>												
1980-81 . . .	919,000	465,000	454,000	292,000	145,000	147,000	32,100	22,400	9,700	71,400	53,300	18,100
1981-82 . . .	920,000	460,000	460,000	295,000	143,000	152,000	31,900	22,200	9,700	73,100	54,300	18,800
1982-83 . . .	933,000	453,000	480,000	293,000	140,000	153,000	30,900	21,200	9,700	72,700	53,100	19,600
1983-84 . . .	937,000	447,000	490,000	288,000	137,000	151,000	30,100	20,400	9,700	72,500	52,000	20,500
1984-85 . . .	940,000	440,000	500,000	286,000	134,000	152,000	29,100	19,400	9,700	72,300	51,700	20,600
1985-86 . . .	932,000	434,000	498,000	276,000	131,000	145,000	28,300	18,600	9,700	72,000	51,600	20,400
1986-87 . . .	911,000	427,000	484,000	265,000	129,000	136,000	27,300	17,600	9,700	70,500	50,800	19,700
1987-88 . . .	865,000	421,000	444,000	251,000	126,000	125,000	26,300	16,600	9,700	66,800	47,900	18,900
1988-89 . . .	834,000	414,000	420,000	247,000	123,000	124,000	25,300	15,600	9,700	65,600	47,500	18,100
1989-90 . . .	807,000	407,000	400,000	243,000	120,000	123,000	24,300	14,600	9,700	64,000	46,800	17,200
1990-91 . . .	790,000	400,000	390,000	239,000	117,000	122,000	23,500	13,800	9,700	62,800	46,400	16,400
High alternative projections <sup>1</sup>												
1980-81 . . .	945,000	475,000	470,000	304,000	151,000	153,000	33,700	23,000	10,700	72,000	53,700	18,300
1981-82 . . .	970,000	490,000	480,000	311,000	155,000	156,000	34,700	23,000	11,700	74,300	55,300	19,000
1982-83 . . .	997,000	507,000	490,000	321,000	162,000	159,000	35,700	23,000	12,700	74,200	54,500	19,700
1983-84 . . .	1,033,000	523,000	510,000	332,000	171,000	161,000	36,900	23,000	13,900	77,200	56,100	21,100
1984-85 . . .	1,030,000	520,000	510,000	336,000	172,000	164,000	38,100	23,000	15,100	78,900	56,800	22,100
1985-86 . . .	1,030,000	510,000	520,000	342,000	175,000	167,000	39,100	23,000	16,100	80,800	57,600	23,200
1986-87 . . .	1,029,000	509,000	520,000	347,000	177,000	170,000	40,300	23,000	17,300	82,100	57,900	24,200
1987-88 . . .	1,033,000	503,000	530,000	351,000	178,000	173,000	41,300	23,000	18,300	83,800	58,600	25,200
1988-89 . . .	1,042,000	502,000	540,000	353,000	177,000	176,000	42,500	23,000	19,500	84,700	58,600	26,100
1989-90 . . .	1,053,000	503,000	550,000	359,000	180,000	179,000	43,300	23,000	20,300	86,900	59,700	27,200
1990-91 . . .	1,054,000	504,000	550,000	367,000	185,000	182,000	43,300	23,000	20,300	87,900	59,900	28,000

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: (1) U.S. Department of Education, National Center for Education Statistics, *Earned Degrees Conferred by Institutions of Higher Education*; and (2) U.S. Department of Commerce, Bureau of the Census, *Current Population Report, "School Enrollments—Social and Economic Characteristics of Students,"* Series P-20.

NOTE.—Because of rounding, details may not add to totals.

## Chapter IV

# INSTRUCTIONAL STAFF

### Teacher Demand in Elementary and Secondary Schools

Unless more college students go into teaching, the Nation may be faced with a teacher shortage in the late 1980's. This situation would sharply contrast with the large general oversupply of teachers that existed during the 1970's and that is expected to continue, at a reduced level, into the early 1980's. However, college students have responded to the large teacher surplus by enrolling in other fields of study. Since 1970, the percentage that new teacher graduates are of bachelor degree recipients has dropped from 37 percent to only 17 percent in 1980. As a result, the supply of new teacher graduates has decreased from 284,000 to 159,000 over the same period<sup>1</sup>. In the 1980's, as the demand for additional teachers increases, job prospects for new teacher graduates should improve markedly. But unless college students respond to the improved market by increasing their enrollment in teacher preparation courses, a teacher shortage is a distinct possibility in the late 1980's.

#### Classroom Teachers

The number of classroom teachers increased from 2.29 million in 1970 to 2.49 million in 1977 (figure 32), despite an enrollment decline of 2.56 million students over the same period. This occurred because initial enrollment declines were often used to relieve overcrowded conditions and many additional teachers were hired to meet the special needs of students. As a result, increases in the teacher-pupil ratio (figure 33) more than offset the enrollment decline. In the late 1970's, the implementation of the Education for All Handicapped Children Act (Public Law 94-142) gave additional impetus to the rise in teacher-pupil ratios. However, such factors as financial difficulties in many large city school districts, tax limitation measures, accelerated enrollment declines, and severe budgetary con-

straints more than offset increases in teacher-pupil ratios due to special education. Consequently, classroom teachers decreased in number from 2.49 million in 1977 to 2.44 in 1980. By 1984, when enrollments are expected to bottom out, classroom teachers are expected to drop to 2.38 million. When enrollments begin climbing again in the late 1980's, the number of classroom teachers will again increase, reaching an all-time high of 2.64 million in 1990.

#### Public Elementary Schools

The number of classroom teachers in public elementary schools rose by more than 5 percent from 1970 to 1978, despite an enrollment decline of over 9 percent. This apparent anomaly results from several factors. First, initial enrollment declines in the relatively small public elementary schools did not allow for consolidating classes. Then, as enrollment declines continued and consolidation became possible by means of school closures, community opposition often delayed the process. In addition, Federal mandates to provide special education to handicapped and bilingual students also resulted in increased teacher-pupil ratios.

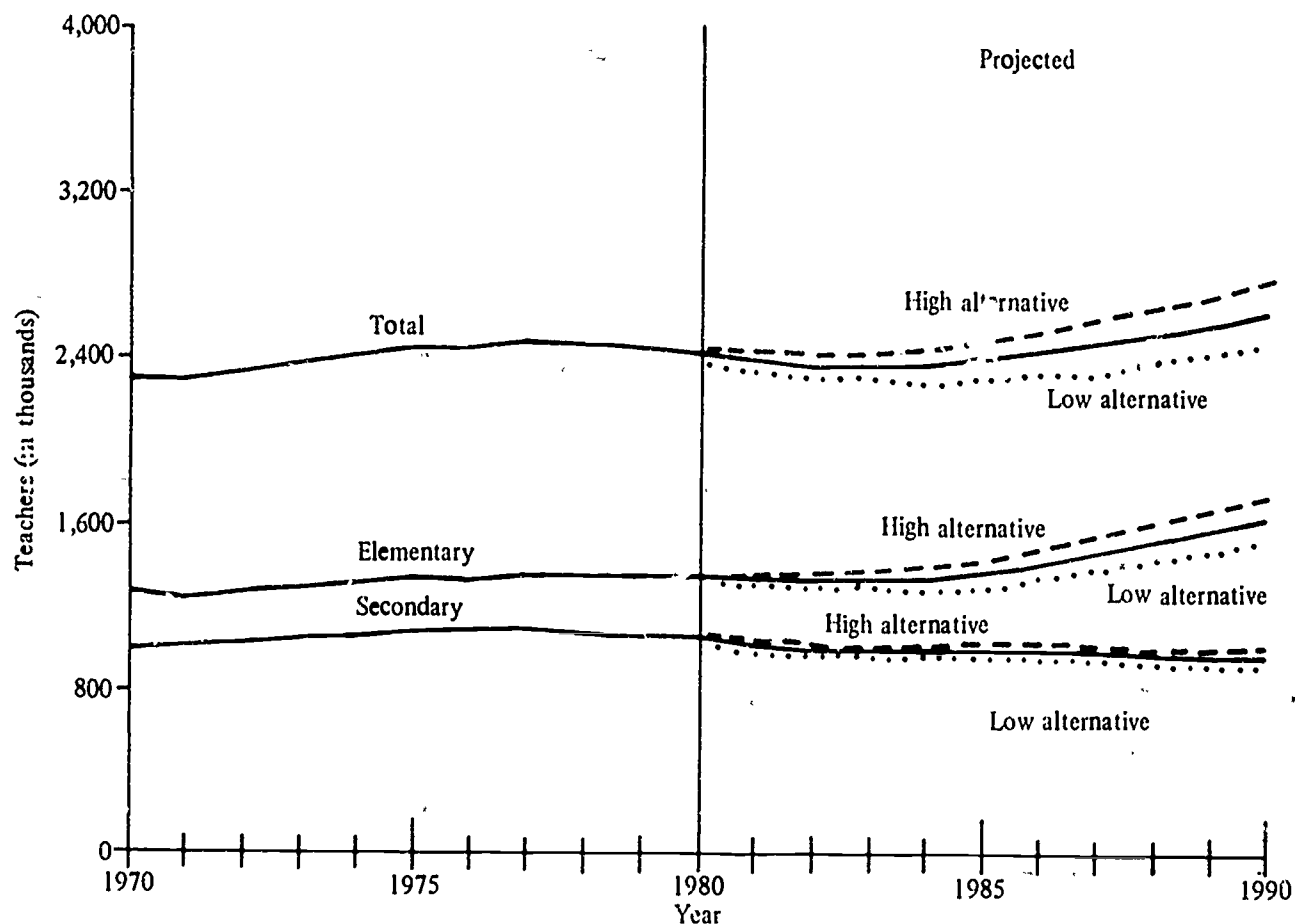
However, in the late 1970's, as enrollment declines accelerated, budgetary constraints imposed on school systems resulted in decreases in the rate of growth in teacher-pupil ratios. As a result, the number of classroom teachers decreased from a high of 1.19 million in 1978 to less than 1.18 million in 1980. This decline is expected to continue through 1984, when the number of classroom teachers are expected to bottom out at 1.17 million. In 1985, as enrollment begins increasing again, teachers are also expected to begin increasing, reaching an all-time high of 1.44 million in 1990.

#### Public Secondary Schools

The low birth cohorts of the 1960's did not move through elementary schools and into secondary schools until the late 1970's. Consequently, classroom teachers in public secondary schools increased from 927,000 in 1970 to

<sup>1</sup>William S. Graybeal, National Education Association, *Teacher Supply and Demand in Public Schools, 1980-81*, Washington, D.C., 1981.

Figure 32.—Classroom teachers in elementary and secondary schools, with alternative projections.  
50 States and D.C., fall 1970 to 1990



1,024,000 in 1977. However, when enrollment declines began to occur in secondary schools in the late 1970's, the larger secondary schools were able to respond more readily than had the smaller elementary schools. As a result, classroom teachers in public secondary schools decreased to 988,000 in 1980, 36,000 fewer teachers than in 1977. As enrollments in these schools continue falling throughout the 1980's, the number of classroom teachers is also expected to continue decreasing, reaching 893,000 in 1990.

### Private Schools

During the early 1970's, the number of classroom teachers in private schools grew at a much faster rate than that of teachers in public schools. And in the late 1970's, when the number of teachers in public schools was declining, the number of teachers in private schools remained fairly stable. Although enrollment in public schools decreased faster than in private schools in the 1970's (11 percent vs. 5 percent), this factor alone does not account for the differing growths in the number of classroom teachers in public and private schools during this period (5 percent vs. 18 percent). The table below shows that

teacher-pupil ratios increased at a faster rate in private schools than in public schools during the 1970's.

Percentage changes in classroom teachers: 1970 to 1980

Control	Number of teachers (in thousands)		Percent change		
	1970	1980	Total	Due to enrollment change	Due to teacher-pupil ratio change
Public . .	2,055	2,163	5.3	-10.6	15.9
Private . .	233	276	18.5	-4.3	22.8

Most of the increase in teacher-pupil ratios in private schools during the 1970's can be attributed to three factors:

(1) Enrollment in Catholic schools, where teacher-pupil ratios have been relatively low, decreased by 29 percent during the 1970's;

(2) Teacher-pupil ratios in Catholic schools increased significantly during the 1970's; and

(3) Enrollment in other private schools (non-Catholic), where teacher-pupil ratios are relatively high, increased by 97 percent during the 1970's.

The table below shows the changes in enrollments and teachers in private schools during the 1970's.

In the early 1980's, the number of teachers in private schools is expected to remain fairly stable around the 1980 level of 276,000 teachers. In the late 1980's, when enrollments begin increasing again, the number of private teachers is expected to increase to 309,000 in 1990. These

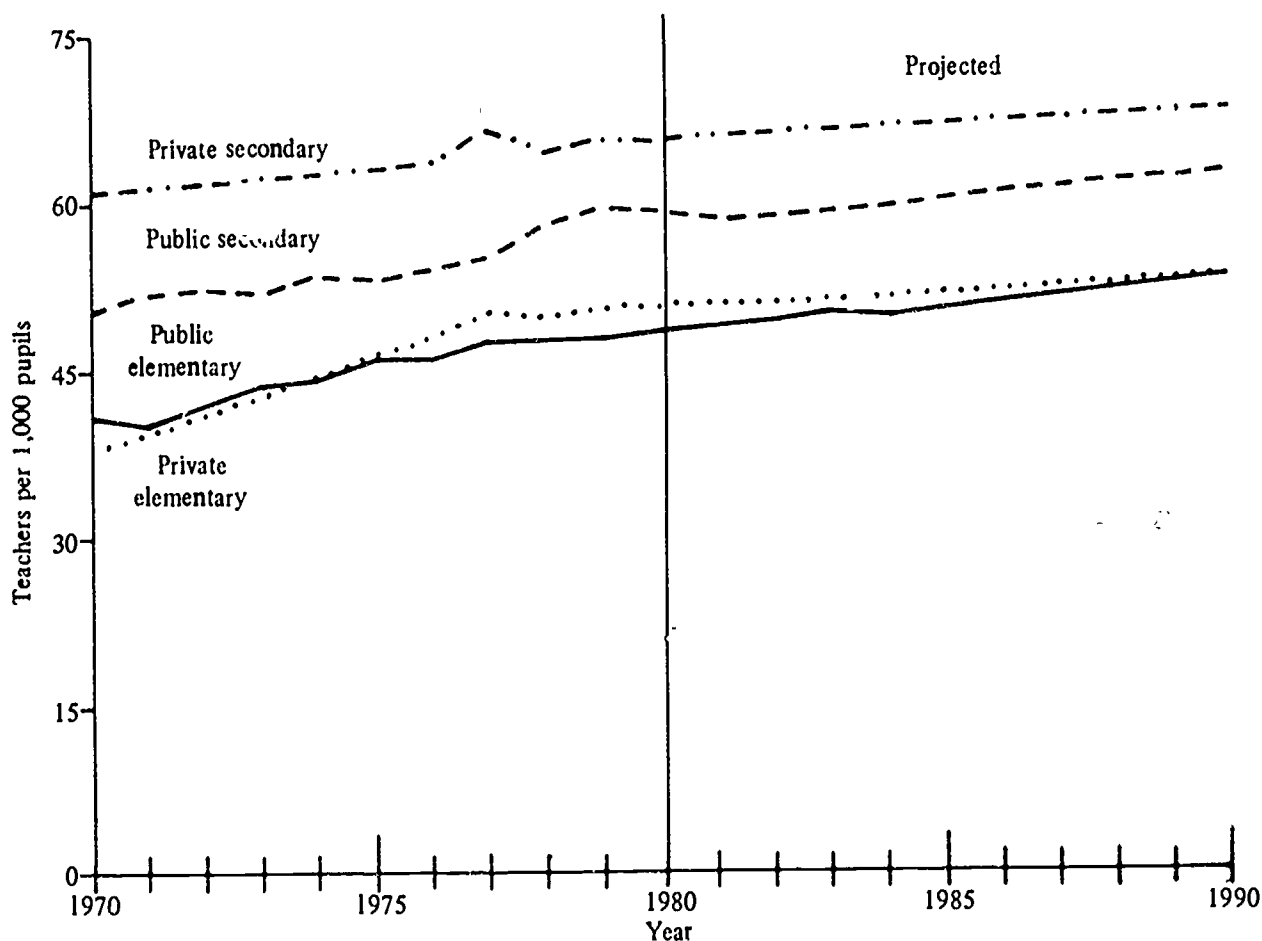
projections are based on the assumption that Catholic schools will continue to enroll about 60 percent of all private students, as they did in 1980. However, if the composition of private schools shifts to a lower proportion of Catholic students, the number of private teachers will probably exceed 309,000 in 1990.

Estimated enrollment and teachers in private schools: 1970 and 1980

(In thousands)

Year (fall)	All private schools			Catholic schools			Other private schools		
	Enrollment	Teachers	Teachers per thousand pupils	Enrollment	Teachers	Teachers per thousand pupils	Enrollment	Teachers	Teachers per thousand pupils
Elementary schools									
1970 .....	4,052	153	37.8	3,356	113	33.7	696	40	57.5
1980 .....	3,692	187	50.7	2,269	97	42.8	1,423	90	63.2
Secondary schools									
1970 .....	1,311	80	61.0	1,008	54	53.6	303	26	85.8
1980 .....	1,364	89	65.2	837	49	58.5	527	40	75.9

Figure 33.—Teachers per 1,000 pupils in regular elementary and secondary schools, with intermediate alternative projections, by control and level of institution: 50 States and D.C. fall 1970 to 1990



## Alternative Classroom Teacher Projections

The alternative projections of teachers shown in table 17 are based on the alternative projections of teacher-pupil ratios in table 18 and the enrollment projections shown in table 7. All three teacher projections show an increase in classroom teachers from 1980 to 1990, but the magnitudes of the increases are considerably different. The low alternative projection shows an increase of only 2 percent or 48,000 teachers from 1980 to 1990, whereas the intermediate projection shows an 8 percent rise or 203,000 teachers, and the high alternative shows a 15 percent increase or 357,000 teachers. While agreeing that the trend will rise for total classroom teachers, the three alternatives also project the number of public secondary teachers to decrease while the number of teachers in public elementary and private elementary and secondary schools increase.

## Demand for Additional Teachers

The demand for additional teachers remained fairly stable during the early 1970's. This occurred because the additional teachers needed to increase teacher-pupil ratios offset the fewer teachers needed due to enrollment decline. However, in the late 1970's, the effects of enrollment declines overwhelmed the effects of increasing teacher-pupil ratios, resulting in a drop in the demand for new teachers that is expected to continue through the early 1980's.

The total demand for additional teachers (not employed as teachers during the previous year) includes those needed to allow for enrollment changes, for changes in teacher-pupil ratios, and for replacement of teachers leaving the profession (turnover). The cumulative demand for additional teachers fell from 896,000 in the 5-year period 1971 to 1975 to 728,000 in the 1976-to-1980 period. During the next 5-year period, as enrollment continues to decline, the demand for additional teachers is expected to continue decreasing. As a result, only 689,000 additional teachers are expected to be hired from 1981 to 1985. But in the late 1980's, as enrollments begin increasing, the demand for additional teachers is expected to rise, resulting in 983,000 teachers being hired from 1986 to 1990. This represents an increase from 138,000 additional teachers hired each year (from 1981 to 1985) to 197,000 additional teachers each year (in the 1986-to-1990 period).

Alternative projections of the demand for additional teachers are shown in table 21. These projections are based in part on the alternative teacher-pupil ratios shown in table 18. However, the factors most responsible for the differences in the three demand projections are the alternative projected turnover rates.

In 1969, the turnover rate in public schools was estimated at 8 percent<sup>2</sup>. This means that 8 percent of the teachers employed in public schools in the fall of 1968 left the profession either permanently or temporarily before school opened in the fall of 1969. Therefore, the 1969 demand for additional teachers in public schools due to turnover would be estimated at 8 percent of the total number of teachers employed in public schools in 1968.

The turnover rate for public schools was estimated to decrease from the 8 percent rate in 1969 to 6 percent in 1973. The 6 percent rate was estimated to continue through 1980 based on several factors. First, the late 1960's, when the turnover survey was conducted, was a period of high job mobility for college graduates. During the early 1970's, the job market for college graduates contracted, limiting the ability of teachers to move into non-teaching fields. Second, during the late 1960's, a seller's market for teachers existed. But by the early 1970's, the large output of teacher graduates combined with enrollment declines changed the teachers market into a buyer's market. This reduced the ability of teachers to return to the profession after leaving temporarily for child bearing, child rearing, etc. A third factor which also reduced the mobility of teachers within the profession was the severe financial constraints imposed on many school districts during the 1970's. As a result, school districts tended to hire teachers at the bottom of the salary schedule rather than more experienced teachers who would command higher salaries.

In the intermediate alternative projection of teacher demand, the 6 percent rate is projected to hold through 1990 for both public and private schools. Although the demand for teachers will increase significantly, it is unlikely that the other favorable conditions that benefited the position of teachers in the job market in the late 1960's will also exist. Therefore, 6 percent appears to be a reasonable turnover rate to expect for the 1980's.

However, with the expected increase in the demand for additional teachers in the late 1980's, a return to an 8 percent turnover rate is conceivable. The high alternative projection of demand for additional teachers is based on a return to the 8 percent turnover rate and the high alternative teacher-pupil ratios shown in table 18. Under this alternative, the demand for additional teachers will begin increasing in the early 1980's and continue throughout the decade. For the 1981 to 1985 period, the high alternative projects a demand for 983,000 additional teachers, 43 percent higher than the 689,000 projected in the intermediate alternative. For the 1986 to 1990 period, the high alternative is projected to be 1,336,000 additional teachers, 36 percent higher than the intermediate projection of 983,000.

<sup>2</sup>A. Stafford Metz and Howard L. Fleischman, U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Teacher Turnover in Public Schools, Fall 1968 to Fall 1969*, (Washington, D.C., U.S. Government Printing Office, 1974).



The low alternative projection of the demand for additional teachers is based on the low alternative teacher-pupil ratios shown in table 18 and the assumption that the turnover rate will fall to 4.8 percent. This low turnover level would be expected if the great majority of those leaving the profession did so for reasons of illness, retirement or death. Under the low alternative projection, the demand for additional teachers would fall to 465,000, 33 percent less than the intermediate projection of 689,000. From 1986 to 1990, the low alternative would increase to only 748,000, 24 percent less than the intermediate projection of 983,000. However, this alternative does not appear to be very likely at the present time.

## Supply of Additional Teachers

The supply of additional teachers consists of new teacher graduates and former teacher graduates who were not employed as teachers in the previous year. New teacher graduates are those graduates of institutions of higher education in a given year who are prepared to teach for the first time. Former teacher graduates are those who graduated in preceding years and are prepared to teach, but did not hold teaching positions in the previous year. Some of these former teacher graduates are former teachers; the remainder have never been employed as teachers.

## New Teacher Graduates

The annual supply of newly qualified teacher graduates decreased from 314,000 in 1971 to 159,000 in 1980 (figure 34). As a percent of bachelor's degrees, new teacher graduates dropped from 37 percent to 17 percent over the same period. The projections of new teacher graduates show an increase to 238,000 in 1990-91, representing about 26 percent of bachelor's degree that year. This projection is based on the assumption that, as the demand for additional teachers and teachers' salaries<sup>3</sup> increase during the 1980's, the proportion of college students preparing to teach will also increase.

The low alternative projection shows the supply of new teacher graduates continuing to decline through 1985 and then increasing at a moderate rate. This would occur if the percentage that new teacher graduates are of bachelor's degree recipients continues to drop, reaching 13 percent in 1985 before climbing back to the 1980 level of 17 percent in 1990.

Under the high alternative, the supply of new teacher graduates would begin growing immediately and then accelerate its growth in the late 1980's. This increase represents a gradual rise to 20 percent of bachelor's

degrees in 1985 and then accelerated growth to 34 percent in 1990.

## Proportion of New Teacher Graduates Seeking Teaching Positions

A National Center for Education Statistics study of recent college graduates in 1976-77<sup>4</sup> indicates that about 75 percent of new teacher graduates actually sought full-time teaching positions. If this proportion remains applicable over the projection period, then the supply of new teacher graduates reflected in table 21 should be reduced by 40,000 to 50,000 each year through 1990.

## The Reserve Pool of Teachers

As previously stated, the supply of new teacher graduates constitutes only part of the total supply of additional teachers. The remainder are referred to in this publication as the "reserve pool of teachers" and are defined as former teacher graduates who are currently not employed as teachers. Each of these persons falls into one of the following labor force categories: (1) unemployed, (2) not currently in the labor force, (3) employed in a nonteaching job, or (4) never actively sought employment. Very limited data exist on which to base rough estimates of the first two components, while no information is available for the last two.

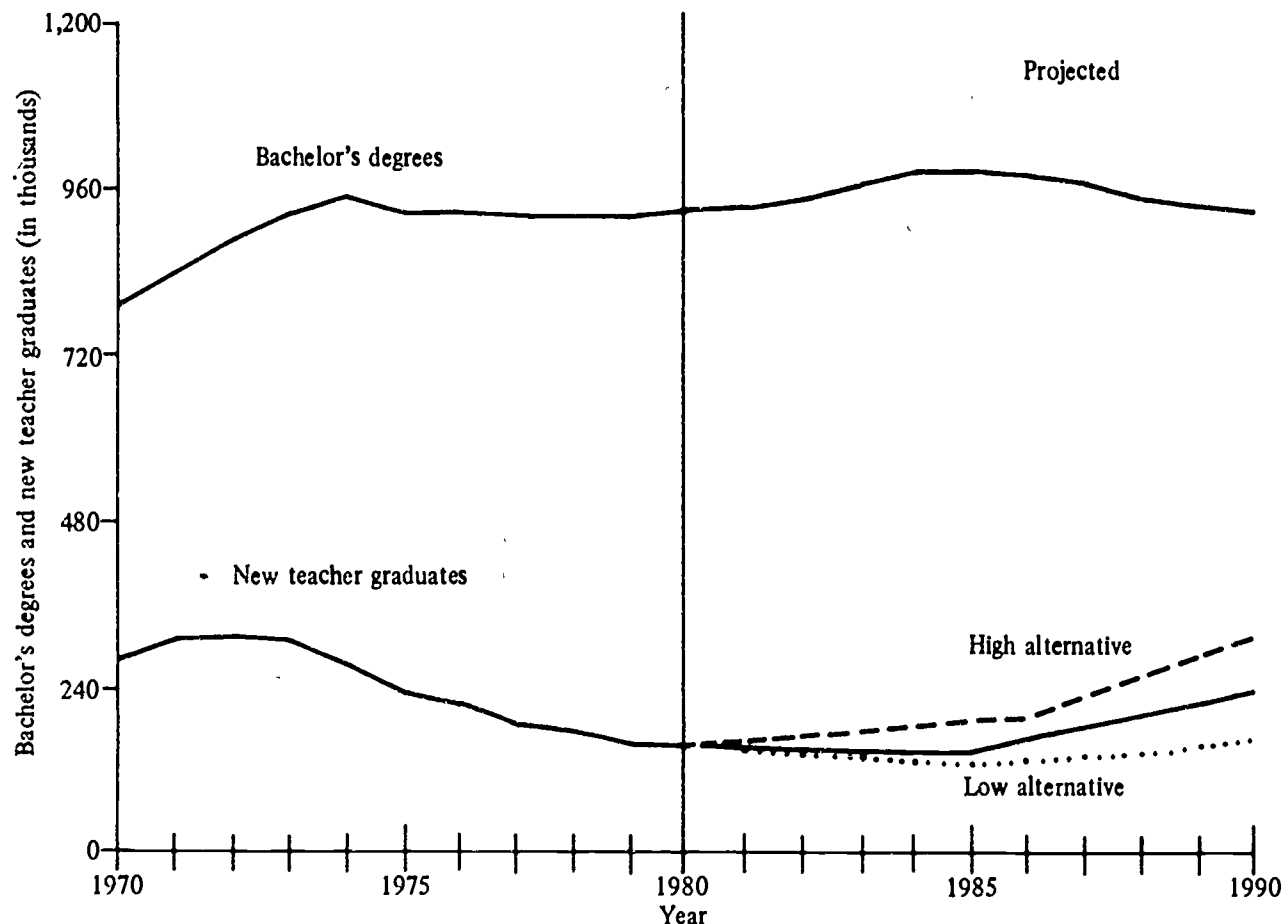
In 1970, about 30,000 experienced teachers were unemployed (this number does not include inexperienced former teacher graduates also unemployed). Considering the large surplus of teachers that has been produced since 1970, it seems reasonable to assume that the total number of unemployed former teachers is now substantially larger than 30,000, but a more concise estimate is not possible. Using Bureau of the Census data, the National Education Association estimates that the labor reserve held about 660,000 former teachers in 1980 (excluding former teacher graduates who never taught). No information exists on the number of former teacher graduates who either are employed in nonteaching jobs or never sought employment.

An estimate of 1 million former teachers and former teacher graduates in the reserve pool is necessarily very rough. However, of this 1 million, not all are actively seeking teaching jobs. The National Education Association estimates that in 1980, only about 120,000 of these former teacher graduates sought teaching positions.

<sup>3</sup> See table 28 for projections of the average annual salary of classroom teachers.

<sup>4</sup> A. Stafford Metz and Jane L. Crane, U.S. Department of Education, National Center for Education Statistics, *New Teachers in the Job Market*, Washington, D.C., 1980.

Figure 34.- Bachelor's degrees, with intermediate alternative projections, and supply of new teacher graduates, with alternative projections: 50 States and D.C., 1969-70 to 1990-91



## Teacher Supply and Demand Outlook

As noted in the two previous sections, the comparison of the total demand for additional teachers and the supply of new teacher graduates shown in table 21 is far from complete. However, this comparison has proven to be a useful indicator of the actual teacher supply and demand situation. During the 1965-1969 period, when teaching jobs were fairly easy to obtain and teacher shortages existed in some localities and subject areas, the demand for additional teachers averaged 224,000 per year, while the supply of new teacher graduates averaged 230,000 per year<sup>5</sup>.

According to the intermediate alternative projection in table 21, the demand for additional teachers in the 1986-1990 period is expected to average 197,000 per year, while the supply of new teachers averages 203,000 (figure 35). Therefore, it seems reasonable to assume that the teacher supply and demand situation in the 1986-1990

period will be similar to that experienced in the 1965-1969 period<sup>6</sup>.

However, if the percentage that new teacher graduates are of bachelor's degree recipients in the 1986-1990 period does not increase beyond the 1980 level of 17 percent, then the supply of new teacher graduates will average only about 160,000 per year. At that level, teacher shortages would occur, unless large numbers of former teacher graduates in the reserve pool could be induced to join the teaching force.

<sup>5</sup>Martin M. Frankel, U.S. Department of Health, Education and Welfare, National Center for Education Statistics, Bulletin, *Teacher Supply and Demand*, Washington, D.C., 1971.

<sup>6</sup>It is interesting to note that the majority of new teacher graduates in 1965-1969 were born before the post-war baby boom and were hired at a time when students born during the baby boom were swelling the enrollment ranks. Similarly, the new teacher graduates of the 1986-1990 period were born during the low-birth years of the 1960's and will be hired at a time when the offspring of those born during the baby boom will also bring about sizable enrollment increases.

## Institutions of Higher Education

Full-time equivalent instructional staff in institutions of higher education increased from 451,000 in 1970 to 624,000 in 1980 (figure 36), an increase of 38 percent. This is more than the 30 percent increase in full-time-equivalent enrollment during the decade. The remainder of the increase was due to increases in staff-student ratios during the decade. During the 1980's, these ratios are projected to remain fairly constant. As a result, full-time-equivalent instructional staff is expected to drop to 589,000 in 1990, a 6 percent decline that parallels a 4 percent decline in full-time-equivalent enrollment. The small difference is due to the projection of full-time-equivalent enrollment, which shows an increase for 2-year institutions and a decrease for 4-year institutions. Since staff-student ratios are much higher at 4-year institutions than at 2-year institutions, total full-time-equivalent instructional staff is expected to

decrease faster than full-time-equivalent enrollment.

Total full-time and part-time instructional staff increased faster during the 1970's than did full-time-equivalent instructional staff, which rose by 38 percent during the 1970's. In contrast, total instructional staff increased by 48 percent — from 573,000 in 1970 to 846,000 in 1980. The more rapid growth in total staff was due to an increase in the proportion of part-time instructors employed in institutions of higher education. From 1970 to 1980, this proportion increased from 33 percent to 41 percent.

Total instructional staff is expected to increase to 888,000 in 1982 before beginning a gradual decrease to 799,000 in 1990. This projection is based on the assumption that the proportion of part-time staff will remain fairly constant at the 1980 level throughout the projection period. However, if this proportion increases, total instructional staff will tend to be higher than the projections shown in table 22. The full-time-equivalent instructional staff projections in table 23 should not be affected by an increase in the proportion of part-time staff.

Figure 35.—Estimate demand for additional teachers in regular elementary and secondary schools and estimated supply of new teacher graduates, 5-year totals: 50 States and D.C., fall 1971 to 1990

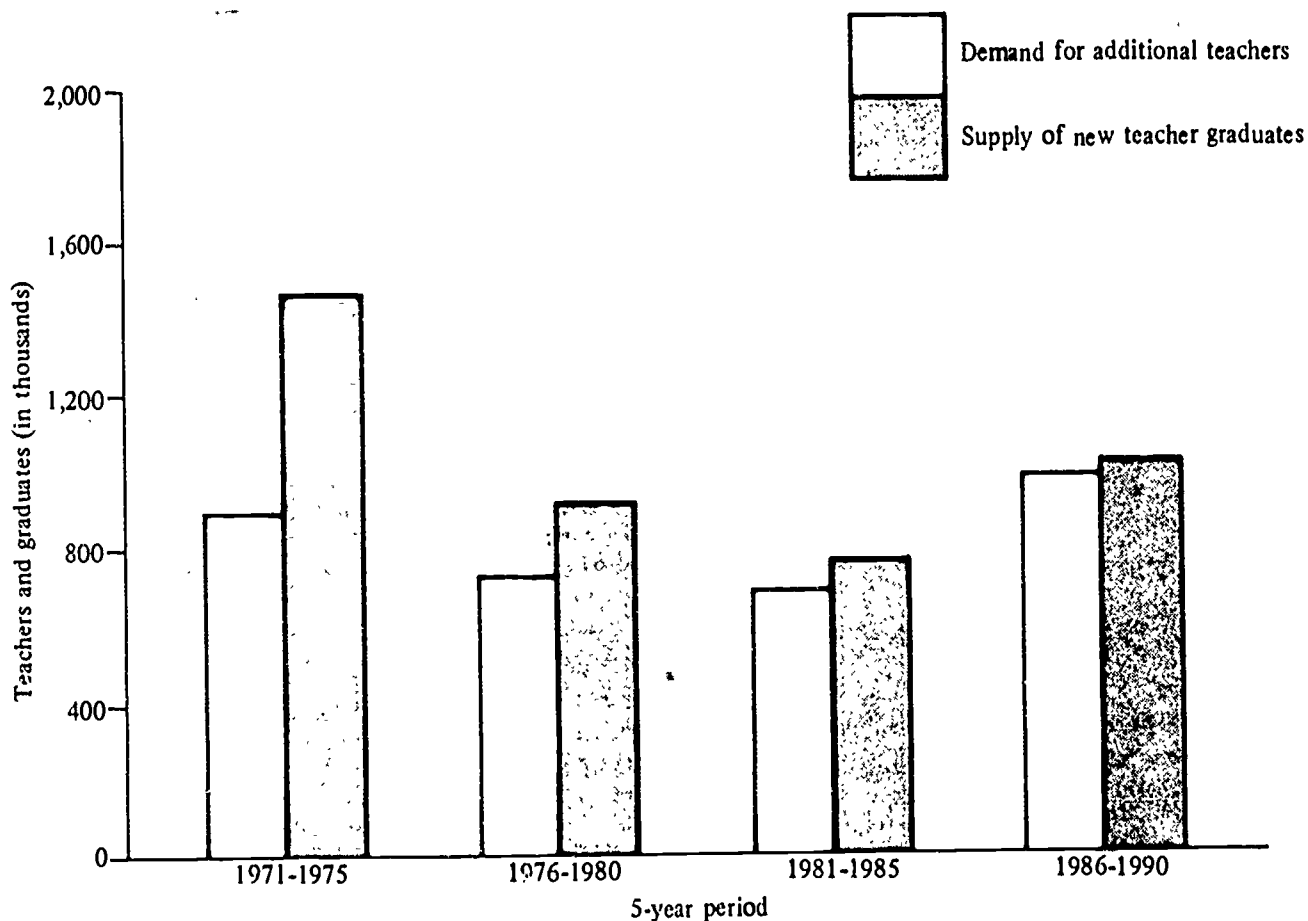
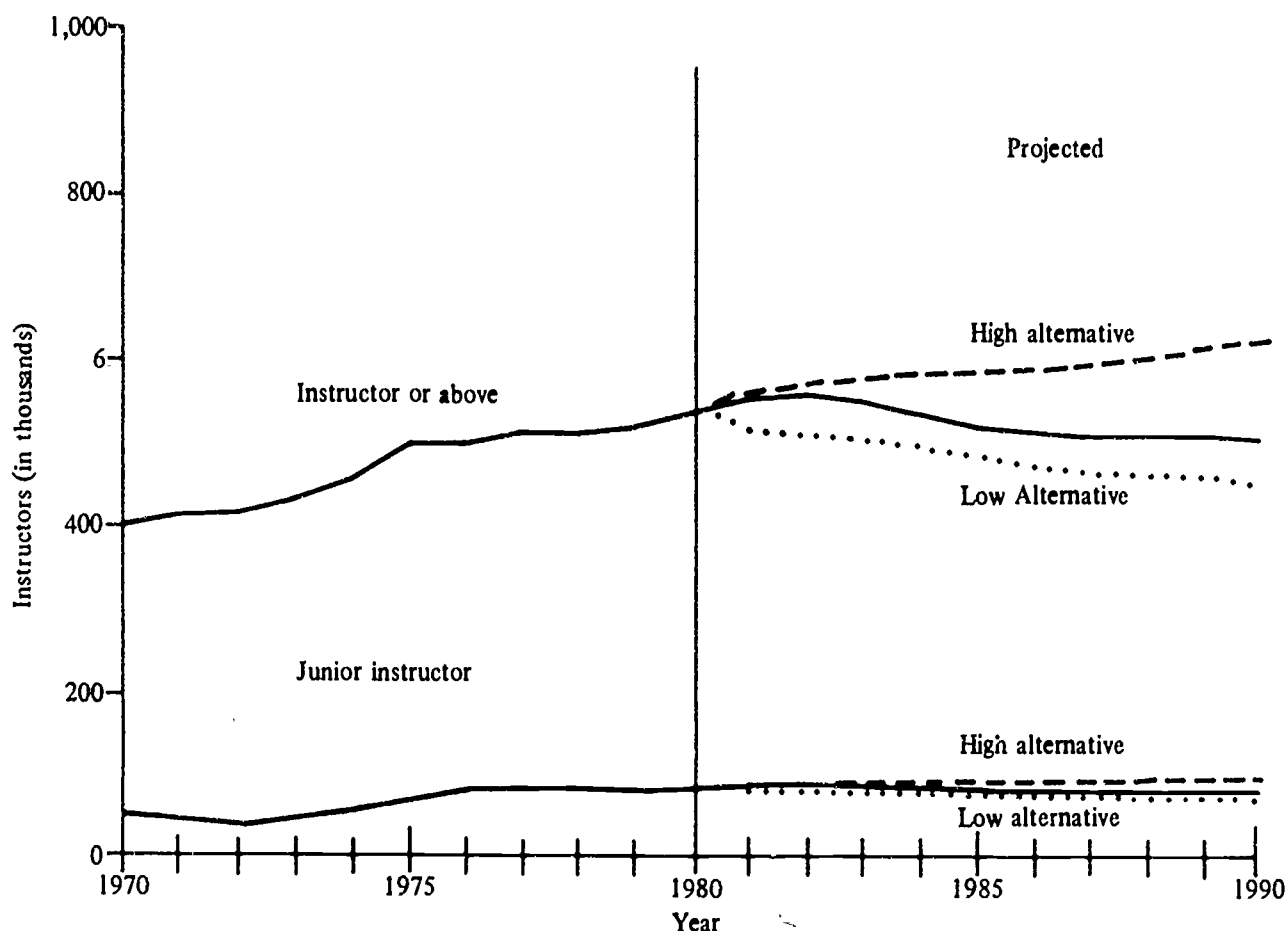




Figure 36.—Full-time-equivalent instructional staff in institutions of higher education, with alternative projections, by professional rank: 50 States and D.C., fall 1970 to 1990



## Alternative Instructional Staff Projections

The alternative projections of instructional staff shown in tables 22 and 23 are based on the high and low projections of full-time-equivalent enrollment shown in table 14. Under the high alternative, full-time-equivalent instructional staff will increase from 624,000 in 1980 to 723,000, while under the low alternative it will drop to 531,000. These alternative staff projections were used as the base for the high and low demand projections shown in table 24.

## Demand for Additional Instructional Staff

The demand for additional full-time-equivalent instructional staff was estimated to have decreased from 229,000 in the 1971-to-1975 period to 183,000 in 1976-to-1980. During the 1980's, demand is expected to continue declining along with full-time equivalent enrollment. During the current 5-year period, 1981 to 1985, demand for additional instructional staff is expected to drop to 125,000, then fall

only slightly to 118,000 during the next 5-year period, 1986 to 1990.

The demand for additional staff in response to enrollment changes is computed as the difference between the total number employed in successive years.

Replacement requirements were estimated at 4.5 percent of each previous year's number of faculty in the intermediate and low alternative and 6 percent in the high alternative.

The 6 percent replacement rate used in the high alternative is based on a 1963 U.S. Office of Education study which showed that about 5 percent of the full-time staff at the instructor level or above in 4-year institutions intended to leave the profession during the following year. The 6 percent figure was arrived at by estimating an additional 1 percent for mortality. This is a high replacement level for a profession whose members typically have to be forced to retire at age 70. However, the 1960's was a period of great opportunity and flexibility for most professions, especially for those professions requiring a high level of education, such as the college instructional staff.

During the 1960's, college enrollment grew at phenomenal rates, increasing from 3.8 million in 1960 to

8.6 million in 1970. This created a large demand for highly educated manpower, especially doctor's degree recipients. But other sectors of the economy were also in competition with colleges for this small manpower pool. As a result, instructional staff members during the 1960's had a great deal of flexibility to move from academia to government and private industry and then back to academia should they choose.

But in the 1970's conditions changed. Alternative opportunities for instructional staff members in government and private industry declined with the end of the Vietnam War and cutbacks in the aerospace program. However, the pool of highly educated manpower had increased drastically during the 1960's. For example, the production of doctor's degrees increased from less than 11,000 in 1960-61 to more than 32,000 in 1970-71.

In the early 1970's, institutions of higher education began to foresee an end of the growth era in higher education in the late 1970's and early 1980's. This was due to the

declining birthrate, budget constraints imposed on public institutions by legislatures, and cutbacks in Federal grants for research and development. They responded by hiring fewer instructional staff. This occurred during a period when the supply of people seeking these jobs had increased dramatically and opportunities in other sectors of the economy were greatly reduced.

The estimated low and intermediate replacement rate projections might have been even lower than the 4.5 percent mentioned, except for two reasons. First, with the end of the growth era in sight, institutions of higher education began denying tenure to young instructors at an increasing rate, thereby forcing them out of the profession. Second, the large number of instructional staff members hired after World War II, when enrollments in higher education began to increase rapidly, began reaching retirement age in the 1970's. Large numbers of instructional staff members who were hired in the 1950's and early 1960's also will be reaching retirement age in the 1980's.

Table 17. Classroom teachers in regular elementary and secondary schools, with alternative projections, by control and level of institution: 50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Total			Public			Private		
	K-12	Elementary	Secondary	K-12	Elementary	Secondary	K-12	Elementary	Secondary
1970 .....	2,288	1,281	1,007	2,055	1,128	927	233	153	80
1971 .....	2,293	1,263	1,030	2,063	1,111	952	230 <sup>1</sup>	152	78
1972 .....	2,334	1,294	1,040	2,103	1,140	963	231 <sup>1</sup>	154	77
1973 .....	2,374	1,309	1,065	2,138	1,152	986	236 <sup>1</sup>	157	79
1974 .....	2,410	1,331	1,079	2,165	1,167	998	245 <sup>1</sup>	164	81
1975 .....	2,451	1,352	1,099	2,196	1,180	1,016	255 <sup>1</sup>	172	83
1976 .....	2,454	1,349	1,105	2,186	1,166	1,020	269	183	85
1977 .....	2,488	1,375	1,113	2,209	1,185	1,024	278	190	89
1978 .....	2,478	1,375	1,103	2,206	1,190	1,016	273	185	87
1979 .....	2,456	1,374	1,082	2,181	1,188	993	275 <sup>1</sup>	186	89
1980 <sup>2</sup> .....	2,439	1,362	1,077	2,163	1,175	988	276	187	89
Intermediate alternative projections <sup>3</sup>									
1981 .....	2,394	1,354	1,040	2,119	1,171	948	275	183	92
1982 .....	2,374	1,351	1,023	2,100	1,168	931	275	183	92
1983 .....	2,377	1,359	1,018	2,100	1,175	925	277	184	93
1984 .....	2,376	1,356	1,020	2,098	1,171	927	278	185	93
1985 .....	2,408	1,385	1,023	2,128	1,199	929	280	186	94
1986 .....	2,450	1,431	1,019	2,163	1,238	925	287	193	94
1987 .....	2,495	1,485	1,010	2,201	1,285	916	294	200	94
1988 .....	2,534	1,539	995	2,238	1,338	900	296	201	95
1989 .....	2,580	1,596	984	2,278	1,389	889	302	207	95
1990 .....	2,642	1,654	988	2,333	1,440	893	307	214	95
Low alternative projections <sup>3</sup>									
1981 .....	2,344	1,328	1,016	2,072	1,147	925	272	181	91
1982 .....	2,312	1,316	996	2,040	1,135	905	272	181	91
1983 .....	2,312	1,321	991	2,040	1,140	900	272	181	91
1984 .....	2,285	1,293	992	2,013	1,112	901	272	181	91
1985 .....	2,310	1,318	992	2,038	1,137	901	272	181	91
1986 .....	2,343	1,359	984	2,066	1,173	893	277	186	91
1987 .....	2,380	1,407	973	2,098	1,216	882	282	191	91
1988 .....	2,405	1,450	955	2,123	1,259	864	282	191	91
1989 .....	2,438	1,498	940	2,151	1,302	849	287	190	91
1990 .....	2,487	1,547	940	2,195	1,346	849	292	201	91
High alternative projections <sup>3</sup>									
1981 .....	2,440	1,376	1,064	2,164	1,193	971	276	183	93
1982 .....	2,434	1,385	1,049	2,154	1,199	955	280	186	94
1983 .....	2,439	1,396	1,043	2,157	1,208	949	282	188	94
1984 .....	2,464	1,417	1,047	2,179	1,227	952	285	190	95
1985 .....	2,503	1,450	1,053	2,215	1,258	957	288	192	96
1986 .....	2,553	1,501	1,052	2,257	1,301	956	296	200	96
1987 .....	2,609	1,563	1,046	2,304	1,355	949	305	208	97
1988 .....	2,658	1,625	1,033	2,350	1,415	935	308	210	98
1989 .....	2,723	1,694	1,029	2,406	1,476	930	317	218	99
1990 .....	2,796	1,761	1,035	2,471	1,535	936	325	226	99

<sup>1</sup>Estimated.

<sup>2</sup>Preliminary.

<sup>3</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics publications: (1) *Statistics of Public Elementary and Secondary Schools*, (2) *Private Schools in American Education, 1981*, and (3) *Statistics of Nonpublic Elementary and Secondary Schools*.

NOTE.—Because of rounding, details may not add to totals.

Table 18.—Teachers per 1,000 pupils in regular elementary and secondary schools, with alternative projections, by control and level of institution: 50 States and D.C., fall 1970 to 1990

Year (fall)	Public		Private	
	Elementary	Secondary	Elementary	Secondary
1970 .....	41.0	50.4	37.8	61.0
1971 .....	40.1	51.8	39.4	61.3
1972 .....	41.7	52.3	41.1	61.7
1973 .....	43.6	51.9	42.8	62.1
1974 .....	44.2	53.5	44.5	62.5
1975 .....	46.0	53.1	46.2	62.9
1976 .....	45.9	54.0	47.8	63.3
1977 .....	47.5	55.0	50.0	66.3
1978 .....	47.6	57.9	49.6	64.3
1979 .....	47.8	59.4	50.5	65.4
1980 .....	48.4	59.1	50.7	65.2
Intermediate alternative projections <sup>1</sup>				
1981 .....	48.9	58.4	50.8	65.8
1982 .....	49.3	58.7	50.9	66.0
1983 .....	50.0	59.1	51.2	66.3
1984 .....	49.8	59.7	51.5	66.6
1985 .....	50.5	60.2	51.8	66.8
1986 .....	51.1	60.8	52.1	67.1
1987 .....	51.7	61.3	52.5	67.4
1988 .....	52.3	61.8	52.8	67.7
1989 .....	52.8	62.2	53.1	67.9
1990 .....	53.3	62.7	53.4	68.2
Low alternative projections <sup>1</sup>				
1981 .....	47.9	57.0	50.2	65.3
1982 .....	47.9	57.1	50.2	65.3
1983 .....	48.5	57.5	50.2	65.3
1984 .....	47.3	58.0	50.2	65.3
1985 .....	47.9	58.4	50.2	65.3
1986 .....	48.4	58.7	50.2	65.3
1987 .....	48.9	59.0	50.2	65.3
1988 .....	49.2	59.3	50.2	65.3
1989 .....	49.5	59.4	50.2	65.3
1990 .....	49.8	59.6	50.2	65.3
High alternative projections <sup>1</sup>				
1981 .....	48.9	59.8	50.9	66.2
1982 .....	50.6	60.2	51.6	66.8
1983 .....	51.4	60.6	52.2	67.3
1984 .....	52.2	61.3	52.8	67.8
1985 .....	53.0	62.0	53.4	68.4
1986 .....	53.7	62.8	54.0	68.9
1987 .....	54.5	63.5	54.7	69.4
1988 .....	55.3	64.2	55.3	70.0
1989 .....	56.1	65.0	55.9	70.5
1990 .....	56.8	65.7	56.5	71.0

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. Ratios for 1970 through 1980 are based on the number of teachers in table 17 and the enrollment in table 7.

Table 19.—Estimated demand for classroom teachers in regular public elementary and secondary school, with alternative projections: 50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Total teacher demand	Demand for additional teachers			
		Total	For enrollment changes	For teacher- pupil ratio changes	For teacher turnover
1970 .....	2,055	—	—	—	—
1971 .....	2,063	152	7	1	144
1972 .....	2,103	174	-13	53	134
1973 .....	2,138	161	-8	43	126
1974 .....	2,165	155	-19	46	128
1975 .....	2,196	161	-7	38	130
1971-1975 .....	—	803	-40	181	662
1976 .....	2,186	122	-23	13	132
1977 .....	2,209	154	-35	58	131
1978 .....	2,206	130	-57	54	133
1979 .....	2,181	107	-54	29	132
1980 .....	2,163	113	-28	10	131
1976-1980 .....	—	626	-97	164	659
Intermediate alternative projections <sup>1</sup>					
1981 .....	2,119	86	-45	1	130
1982 .....	2,099	107	-35	15	127
1983 .....	2,100	127	-21	22	126
1984 .....	2,098	124	-6	4	126
1985 .....	2,128	156	5	25	126
1981-1985 .....	—	600	-102	67	635
1986 .....	2,163	163	12	23	128
1987 .....	2,201	168	16	22	130
1988 .....	2,238	169	15	22	132
1989 .....	2,278	174	22	18	134
1990 .....	2,333	192	35	20	137
1986-1990 .....	—	866	100	105	661
Low alternative projections <sup>1</sup>					
1981 .....	2,072	42	-31	-46	119
1982 .....	2,040	72	-33	1	104
1983 .....	2,040	98	-20	20	98
1984 .....	2,013	71	-7	-20	98
1985 .....	2,038	122	5	20	97
1981-1985 .....	—	405	-86	-25	516
1986 .....	2,066	126	12	16	98
1987 .....	2,098	131	14	18	99
1988 .....	2,123	126	13	12	101
1989 .....	2,151	130	19	9	102
1990 .....	2,195	147	33	11	103
1986-1990 .....	—	660	91	66	503

See footnotes at end of table.

Table 19.—Estimated demand for classroom teachers in regular public elementary and secondary school, with alternative projections: 50 States and D.C., fall 1970 to 1990—Continued  
(In thousands)

Year (fall)	Total teacher demand	Demand for additional teachers			
		Total	For enrollment changes	For teacher- pupil ratio changes	For teacher turnover
High alternative projections <sup>1</sup>					
1981 .....	2,164	156	-31	46	141
1982 .....	2,154	141	-36	26	151
1983 .....	2,157	165	-22	25	162
1984 .....	2,179	195	-7	29	173
1985 .....	2,215	210	6	30	174
1981-1985 .....	—	867	-90	156	801
1986 .....	2,257	219	14	28	177
1987 .....	2,304	228	16	31	181
1988 .....	2,350	230	16	30	184
1989 .....	2,406	244	22	34	188
1990 .....	2,471	257	36	29	192
1986-1990 .....	—	1,178	104	152	922

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Statistics of Public Elementary and Secondary Schools*.

NOTE.—Because of rounding, details may not add to totals.

Table 20 - Estimated demand for classroom teachers in regular private elementary and secondary school, with alternative projections: 50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Total teacher demand	Demand for additional teachers			
		Total	For enrollment changes	For pupil- teacher ratio changes	For teacher turnover
1970.....	233	—	—	—	—
1971.....	230	11	-9	6	14
1972.....	231	15	-6	7	14
1973.....	236	19	-2	7	14
1974.....	245	23	2	7	14
1975.....	255	25	3	7	15
1971-1975.....	—	93	-12	34	71
1976.....	269	28	6	7	15
1977.....	278	27	-2	13	16
1978.....	273	10	-2	-5	17
1979.....	275	19	-2	5	16
1980.....	276	18	0	1	17
1976-1980.....	—	102	0	21	81
Intermediate alternative projections <sup>1</sup>					
1981.....	275	16	-3	2	17
1982.....	275	17	0	0	17
1983.....	277	19	0	2	17
1984.....	278	18	0	1	17
1985.....	280	19	0	2	17
1981-1985.....	—	89	-3	7	85
1986.....	287	24	6	1	17
1987.....	294	24	5	2	17
1988.....	296	20	0	2	18
1989.....	302	24	5	1	18
1990.....	309	25	5	2	18
1986-1990.....	—	117	21	8	88
Low alternative projections <sup>1</sup>					
1981.....	272	7	-6	-2	15
1982.....	272	14	0	0	14
1983.....	272	13	0	0	13
1984.....	272	13	0	0	13
1985.....	272	13	0	0	13
1981-1985.....	—	60	-6	-2	68
1986.....	277	18	5	0	13
1987.....	282	18	5	0	13
1988.....	282	14	0	0	14
1989.....	287	19	5	0	14
1990.....	292	19	5	0	14
1986-1990.....	—	88	20	0	68

See footnotes at end of table.

Table 20.—Estimated demand for classroom teachers in regular private elementary and secondary school, with alternative projections: 50 States and D.C., fall 1970 to 1990—Continued  
(In thousands)

Year (fall)	Total teacher demand	Demand for additional teachers			
		Total	For enrollment changes	For pupil- teacher ratio changes	For teacher turnover
High alternative projections <sup>1</sup>					
1981 .....	276	18	-2	2	18
1982 .....	280	23	0	4	19
1983 .....	282	23	0	2	21
1984 .....	285	26	0	3	23
1985 .....	288	26	0	3	23
1981-1985 .....	—	116	-2	14	104
1986 .....	296	31	6	2	23
1987 .....	305	33	5	4	24
1988 .....	308	27	0	3	24
1989 .....	317	34	6	3	25
1990 .....	325	33	6	2	25
1986-1990 .....	—	158	23	14	121

<sup>1</sup> For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Education, National Center for Education, *Private Schools in American Education, 1981*, and *Statistics of Nonpublic Elementary and Secondary Schools*.

NOTE.—Because of rounding, details may not add to totals.



Table 21.—Estimated supply of new teacher graduates compared to estimated total demand for additional teachers in regular elementary and secondary schools, with alternative projections: 50 States and D.C., fall 1971 to 1990

(In thousands)

Year (fall)	Estimated supply of new teacher graduates	Estimated demand for additional teachers	Supply as a percent of demand
1971 .....	314	163	192.6
1972 .....	317	189	167.7
1973 .....	313	180	173.9
1974 .....	279	178	156.7
1975 .....	238	186	128.0
1971-1975 .....	1,461	896	163.1
1976 .....	222	150	148.0
1977 .....	194	181	107.2
1978 .....	181	140	129.3
1979 .....	163	126	129.4
1980 .....	159	131	121.4
1976-1980 .....	919	728	126.2
Intermediate alternative projections <sup>1</sup>			
1981 .....	156	102	152.9
1982 .....	154	124	124.2
1983 .....	153	146	104.8
1984 .....	153	142	107.7
1985 .....	149	175	85.1
1981-1985 .....	765	689	111.0
1986 .....	169	187	90.4
1987 .....	187	192	97.4
1988 .....	203	189	107.4
1989 .....	220	198	111.1
1990 .....	238	217	109.7
1986-1990 .....	1,017	983	103.5
Low alternative supply projections—high alternative demand projections <sup>1</sup>			
1981 .....	152	174	87.4
1982 .....	146	164	89.0
1983 .....	142	188	75.5
1984 .....	137	221	62.0
1985 .....	129	236	54.7
1981-1985 .....	706	983	71.8
1986 .....	136	250	54.4
1987 .....	143	261	54.8
1988 .....	147	257	57.2
1989 .....	153	278	55.0
1990 .....	159	290	54.8
1986-1990 .....	738	1,336	55.2

See footnotes at end of table.

Table 21.—Estimated supply of new teacher graduates compared to estimated total demand for additional teachers in regular elementary and secondary schools, with alternative projections: 50 States and D.C., fall 1971 to 1990—Continued  
(In thousands)

Year (fall)	Estimated supply of new teacher graduates	Estimated demand for additional teachers	Supply as a percent of demand
High alternative supply projections—low alternative demand projections <sup>1</sup>			
1981 .....	165	49	336.7
1982 .....	172	86	200.0
1983 .....	181	111	163.1
1984 .....	190	84	226.2
1985 .....	196	135	145.2
1981-1985 .....	904	465	194.4
1986 .....	201	144	139.6
1987 .....	232	149	155.7
1988 .....	259	140	185.0
1989 .....	288	149	193.3
1990 .....	317	166	191.0
1986-1990 .....	1,297	748	173.4

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: National Education Association, *Teacher Supply and Demand in Public Schools, 1980-81*.

Table 22.—Full-time and part-time instructional staff in all institutions of higher education, with alternative projections, by professional rank: 50 States and D.C., 1970 to 1990

(In thousands)

Year (fall)	Total	Instructor or above			Junior instructor		
		Total	Full-time	Part-time	Total	Full-time	Part-time
1970 .....	573	474	369	104	101	14	87
1971 <sup>1</sup> .....	590	492	379	113	97	10	88
1972 .....	590	500	380	120	90	6	84
1973 <sup>1</sup> .....	634	527	389	138	107	13	94
1974 <sup>1</sup> .....	695	567	406	161	128	17	111
1975 <sup>1</sup> .....	781	628	440	188	153	22	131
1976 .....	793	633	434	199	160	28	132
1977 <sup>1</sup> .....	812	650	447	203	162	29	134
1978 <sup>1</sup> .....	809	647	445	202	162	29	134
1979 <sup>1</sup> .....	823	657	451	206	166	28	138
1980 <sup>1</sup> .....	846	678	466	212	168	30	138
Intermediate alternative projections <sup>2</sup>							
1981 .....	877	704	480	224	173	30	143
1982 .....	888	713	485	228	175	30	145
1983 .....	872	702	477	225	170	30	140
1984 .....	847	680	464	216	167	29	138
1985 .....	824	663	453	210	161	28	133
1986 .....	814	656	446	210	158	28	130
1987 .....	808	653	443	210	155	28	127
1988 .....	806	652	442	210	154	27	127
1989 .....	807	653	443	210	154	27	127
1990 .....	799	645	441	204	154	27	127
Low alternative projections <sup>2</sup>							
1981 .....	817	656	449	207	161	28	133
1982 .....	812	651	444	207	161	28	133
1983 .....	801	646	439	207	155	28	127
1984 .....	783	629	432	197	154	27	127
1985 .....	766	619	422	197	147	26	121
1986 .....	750	604	412	192	146	26	120
1987 .....	741	596	404	192	145	25	120
1988 .....	734	593	401	192	141	25	116
1989 .....	730	589	400	189	141	25	116
1990 .....	723	585	396	189	138	24	113
High alternative projections <sup>2</sup>							
1981 .....	888	713	485	228	175	30	145
1982 .....	903	727	496	231	176	31	145
1983 .....	918	739	502	237	179	32	147
1984 .....	928	746	506	240	182	32	150
1985 .....	932	750	510	240	182	32	150
1986 .....	939	757	513	244	182	32	150
1987 .....	947	764	517	247	183	33	150
1988 .....	959	774	524	250	185	33	152
1989 .....	975	789	533	256	186	34	152
1990 .....	986	798	539	259	188	34	154

<sup>1</sup>Estimated.

<sup>2</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Employees in Institutions of Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

Table 23.—Full-time equivalent instructional staff in all institutions of higher education, with alternative projections, by professional rank: 50 States and D.C., fall 1970 to 1990  
(In thousands)

Year (fall)	Estimated total full-time- equivalent	Instructor or above			Junior instructor		
		Total	Full-time	Full-time equivalent of part-time	Total	Full-time	Full-time equivalent of part-time
1970 .....	451	402	369	33	50	14	36
1971 <sup>1</sup> .....	458	414	379	35	44	10	34
1972 .....	455	417	380	37	38	6	32
1973 <sup>1</sup> .....	481	433	389	44	48	13	35
1974 <sup>1</sup> .....	516	457	406	51	59	17	42
1975 <sup>1</sup> .....	574	501	440	61	73	22	51
1976 .....	584	501	434	67	83	28	55
1977 <sup>1</sup> .....	599	514	447	67	84	29	55
1978 <sup>1</sup> .....	597	513	445	68	84	29	55
1979 <sup>1</sup> .....	605	520	451	69	85	28	57
1980 <sup>1</sup> .....	624	537	466	71	87	30	57
Intermediate alternative projections <sup>2</sup>							
1981 .....	644	555	480	75	89	30	59
1982 .....	651	561	485	76	90	30	60
1983 .....	640	552	477	75	88	30	58
1984 .....	622	536	464	72	86	29	57
1985 .....	606	523	453	70	83	28	55
1986 .....	598	516	446	70	82	28	54
1987 .....	594	513	443	70	81	28	53
1988 .....	592	512	442	70	80	27	53
1989 .....	593	513	443	70	80	27	53
1990 .....	589	509	441	68	80	27	53
Low alternative projections <sup>2</sup>							
1981 .....	601	518	449	69	83	28	55
1982 .....	596	513	444	69	83	28	55
1983 .....	589	508	439	69	81	28	53
1984 .....	578	498	432	66	80	27	53
1985 .....	565	488	422	66	77	25	51
1986 .....	552	476	412	64	76	26	50
1987 .....	543	468	404	64	75	25	50
1988 .....	538	465	401	64	73	25	48
1989 .....	536	463	400	63	73	25	48
1990 .....	531	459	396	63	72	25	47
High alternative projections <sup>2</sup>							
1981 .....	651	561	485	76	90	30	60
1982 .....	664	573	496	77	91	31	60
1983 .....	674	581	502	79	93	32	61
1984 .....	680	586	506	80	94	32	62
1985 .....	684	590	510	80	94	32	62
1986 .....	688	594	513	81	94	32	62
1987 .....	694	599	517	82	95	33	62
1988 .....	703	607	524	83	96	33	63
1989 .....	715	618	533	85	97	34	63
1990 .....	723	625	539	86	98	34	64

<sup>1</sup>Estimated.

<sup>2</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Health, Education and Welfare, National Center for Education Statistics, *Employees in Institutions of Higher Education*.

NOTE.—Because of rounding, detail may not add to totals.

Table 24.—Estimated demand for full-time-equivalent instructional staff in institutions of higher education, with alternative projections: 50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Full-time-equivalent instructional staff	Additional full-time-equivalent instructional staff needed		
		Total	For enrollment and student-staff ratio changes	For replacement
1970 .....	451	—	—	—
1971 .....	458	27	7	20
1972 .....	455	18	-3	21
1973 .....	481	46	26	20
1974 .....	516	57	35	22
1975 .....	574	81	58	23
1971-1975 .....	—	229	123	106
1976 .....	584	36	10	26
1977 .....	599	41	15	26
1978 .....	597	25	-2	27
1979 .....	605	35	8	27
1980 .....	624	46	19	27
1976-1980 .....	—	183	50	133
Intermediate alternative projections <sup>1</sup>				
1981 .....	644	48	20	28
1982 .....	651	36	7	29
1983 .....	640	18	-11	29
1984 .....	622	11	-18	29
1985 .....	606	12	-16	28
1981-1985 .....	—	125	-18	143
1986 .....	598	19	-8	27
1987 .....	594	23	-4	27
1988 .....	592	25	-2	27
1989 .....	593	28	1	27
1990 .....	589	23	-4	27
1986-1990 .....	—	118	-17	135
Low alternative projections <sup>1</sup>				
1981 .....	601	5	-23	28
1982 .....	596	22	-5	27
1983 .....	589	20	-7	27
1984 .....	578	16	-11	27
1985 .....	565	13	-13	26
1981-1985 .....	—	76	-59	135
1986 .....	552	12	-13	25
1987 .....	543	16	-9	25
1988 .....	538	19	-5	24
1989 .....	536	22	-2	24
1990 .....	531	19	-15	24
1986-1990 .....	—	88	-34	122

See footnotes at end of table.

Table 24.—Estimated demand for full-time-equivalent instructional staff in institutions of higher education, with alternative projections: 50 States and D.C., fall 1970 to 1990—Continued  
(In thousands)

Year (fall)	Full-time-equivalent instructional staff	Additional full-time-equivalent instructional staff needed		
		Total	For enrollment and student-staff ratio changes	For replacement
High alternative projections <sup>1</sup>				
1981 .....	651	58	27	31
1982 .....	664	49	13	36
1983 .....	674	50	10	40
1984 .....	680	46	6	40
1985 .....	684	45	4	41
1981-1985 .....	—	248	60	188
1986 .....	688	54	14	40
1987 .....	694	47	6	41
1988 .....	703	51	9	42
1989 .....	715	54	12	42
1990 .....	723	51	8	43
1986-1990 .....	—	257	49	208

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE. U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Employees in Institutions of Higher Education*.

# Chapter V

## EXPENDITURES OF EDUCATION INSTITUTIONS

### Total Expenditures

Total annual expenditures of regular educational institutions (in 1980-81 dollars) increased from \$174.2 billion in 1970-71 to \$188.3 billion in 1980-81 and are projected to increase to \$205.4 billion in 1990-91 (figure 37). This growth in total expenditures reflects a trend of increasing expenditure per student resulting from an increase in resource-use per student, as well as a rise in the cost of these resources.

Although expenditure data for private elementary and secondary schools are not available, illustrative estimates of these expenditures are included in tables 25 and 26. These illustrations are based on the assumption that the cost per student in private schools is the same as the cost per student in public schools. Therefore, they represent what it would cost the public schools to educate the students who are currently in private schools. These figures do not attempt to estimate the actual expenditures in private schools.

### Elementary and Secondary Schools

During the 1970's, total expenditures in 1980-81 dollars increased by only 3.5 percent, from \$113.9 billion in 1970-71 to \$117.9 billion in 1980-81 (figure 38). Although current expenditures grew by nearly 13 percent, capital outlay dropped 54 percent in response to declining enrollment. And interest expenditures, whose trend tends to lag behind that of capital outlay, also decreased by nearly 23 percent. As a result, capital outlay and interest accounted for less than 9 percent of all expenditures in 1980-81 compared to more than 15 percent in 1970-71. During the 1980's, this trend is expected to continue. In 1990-91, capital outlay and interest are projected to account for only 5 percent of all expenditures.

### Regular Public Elementary and Secondary Schools

#### Current Expenditures

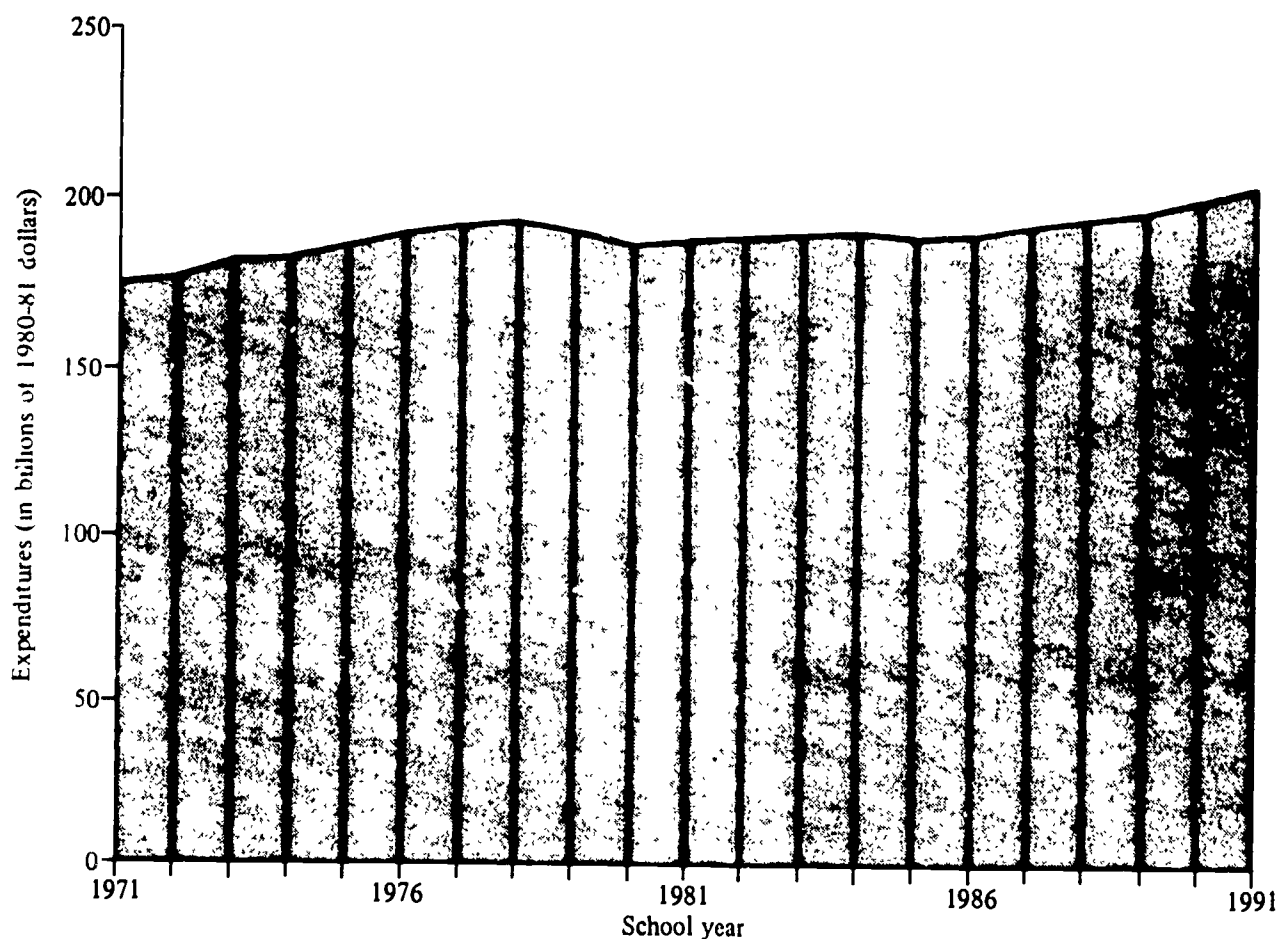
Current expenditures for regular public elementary and secondary schools increased by 144 percent during the 1970's — from \$39.6 billion in 1970-71 to \$96.8 billion in 1980-81. However, when expenditure figures are converted to 1980-81 dollars by means of the Consumer Price Index, the pattern of current expenditures during the 1970's is markedly changed.

In real terms, current expenditures increased from \$86.2 billion in 1970-71 to \$101.5 billion in 1977-78. In 1978-79, the trend reversed as current expenditures began decreasing, reaching \$96.8 billion in 1980-81. This decrease is expected to continue in 1981-82, when current expenditures are expected to bottom out at \$95.5 billion before beginning a gradual increase that is expected to reach \$116.4 billion in 1990-91.

During the 1970's, many factors contributed to an increase in the cost of education. For example, the costs of fuel, textbooks, and other supplies rose rapidly. Federal mandates to provide special education to handicapped and bilingual students also resulted in increased costs. Consequently, current expenditures increased from 1970-71 through 1977-78 despite enrollment declines throughout the period<sup>1</sup>.

<sup>1</sup> A study of cost savings due to declining enrollment in New York State found that "when the loss of enrollment is evenly (normally) distributed across classes within schools and among schools within LEA's [local education agencies], only 10 percent of the average cost per student is 'saved' by a student loss. (Wolfe, Lee R., *Revenues and Expenditures for Public Elementary and Secondary Education, 1978-79*, National Center for Education Statistics, 1981.)

Figure 37. - Expenditures (in 1980-81 dollars) in regular educational institutions, with intermediate projections: 50 States and D.C., 1970-71 to 1990-91



Beginning in 1977-78, enrollment decreased at a more rapid rate, which allowed for greater savings through school closures. And at the same time, teachers' salaries began to decrease substantially in real terms. Therefore, current expenditures decreased in real-terms from 1977-78 to 1980-81, and this decrease is expected to continue through 1981-82. In 1982-83, current expenditures are expected to begin a gradual increase that will continue through 1990-91 as enrollment declines diminish and then change to increases in 1985-86, and as the favorable job market for teachers in the 1980's results in increased salaries.

The table below and figure 39 show that current expenditure per pupil in real terms increased throughout the 1970's and is expected to continue increasing throughout the 1980's. However, the table also shows that the proportion of current expenditure per pupil spent on teachers' salaries has declined from 49.2 percent in 1970-71 to 38.7 percent in 1980-81, despite increasing teacher-pupil ratios during the decade. This trend is not expected to continue

throughout the 1980's, when teachers' salaries are expected to increase. As a result, in the 1980's expenditures for teachers' salaries are expected to increase to 40.5 percent of all current expenditures in 1990-91.

Current expenditures per pupil in 1980-81 dollars

Year	Total	For teachers' salaries	Other expenditure	Percent for teachers' salaries
1970-71 . .	1,982	975	1,007	49.2
1975-76 . .	2,343	1,044	1,299	44.6
1980-81 . .	2,553	989	1,564	38.7
Projected				
1985-86 . .	2,814	1,124	1,690	39.9
1990-91 . .	3,053	1,235	1,818	40.5



The high alternative projection of current expenditures shows an increase beyond the intermediate level of \$116.4 billion to \$133.3 billion. This high expenditure level could occur if the response to a relatively small supply of teachers pushes teachers' salaries substantially beyond the high levels of the early 1970's (in real terms) and if other current expenditure per pupil (not for teachers' salaries) increase as rapidly as it did in the 1970's.

The low alternative projection of current expenditure per pupil shows a continued decrease through 1984-85 and then a gradual increase to \$99.6 billion, less than the amounts expended in the 1976-77-to-1978-79 time period. This low level could occur if teachers' salaries remain at their current low levels and if other current expenditure per pupil does not continue to grow, but also remains at its 1980-81 level.

### Teachers' Salaries

Average annual salaries of classroom teachers in public schools increased from \$9,269 in 1970-71 to \$17,264 in 1980-81 (figure 40). However, in real terms, teachers' salaries decreased by more than 14 percent over the decade — from \$20,168 in 1970-71 to \$17,264 in 1980-81.

This decline in teachers' salaries occurred during a period of large teacher surplus in the 1970's. However, as

the teacher surplus abates in the early 1980's and the Nations' school systems are faced with a possible teacher shortage in the late 1980's, salaries are expected to climb back to the high levels of the early 1970's. By 1990-91, teachers' salaries are expected to average about \$20,000 in 1980-81 dollars.

### Capital Outlay

New school construction has declined during the 1970's along with enrollment. Since 84 percent of capital outlay was for land and buildings in 1973-74, it is not surprising that annual capital outlay decreased by more than 50 percent in real terms over the decade — from \$13.0 billion in 1970-71 to \$6.1 billion in 1980-81 (figure 41).

Although school buildings will continue to be built because of replacement, student migration and the reduction of overcrowded and unsatisfactory classrooms, it is expected that capital outlay will continue to decline through 1987-88, but not as rapidly as during the 1970's. In 1988-89, capital outlay is expected to begin increasing as new construction is undertaken to meet rising enrollment.

The low alternative projection shows a continuation of the decreasing trend, reaching \$3.1 billion in 1990-91. The high alternative shows only gradual decreases through 1985-86, followed by increases back to the 1980-81 level of

Figure 38.—Expenditures (in 1980-81 dollars) in regular elementary and secondary schools, with intermediate alternative projections, by type: 50 States and D.C., 1970-71 to 1990-91

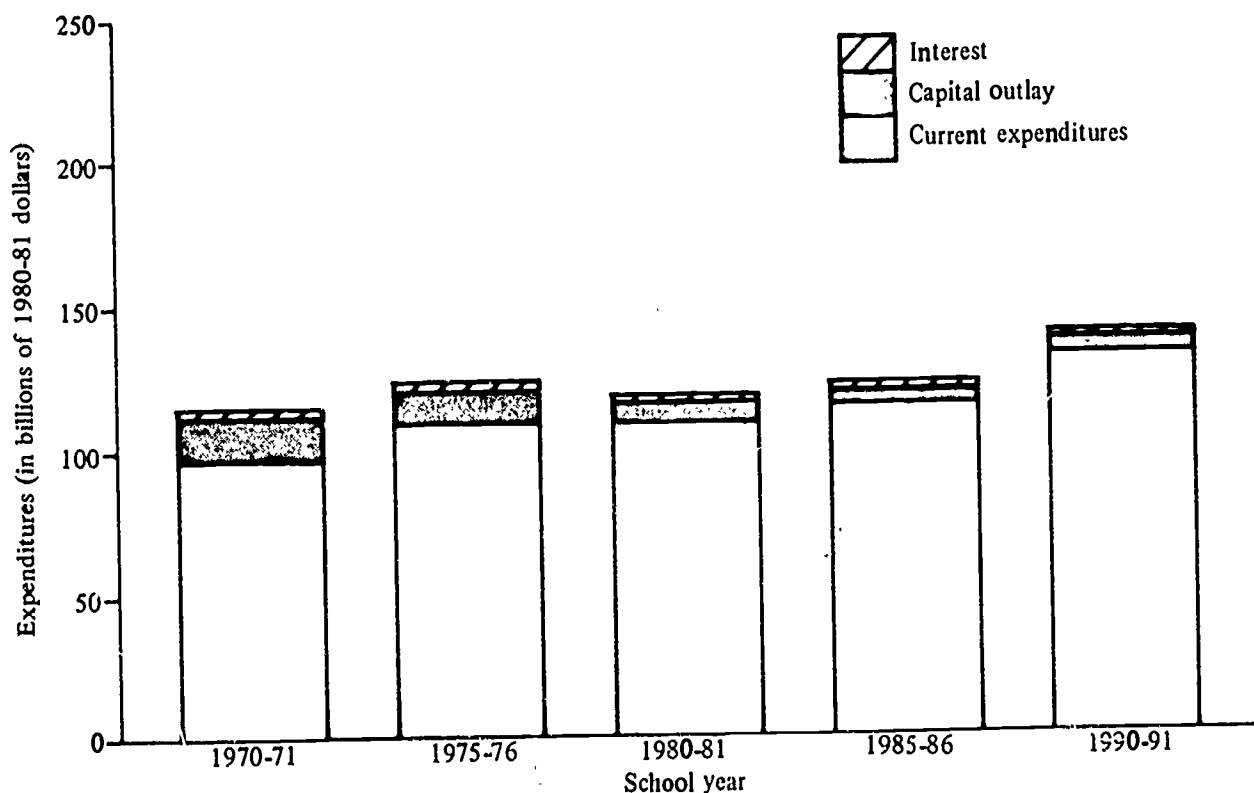
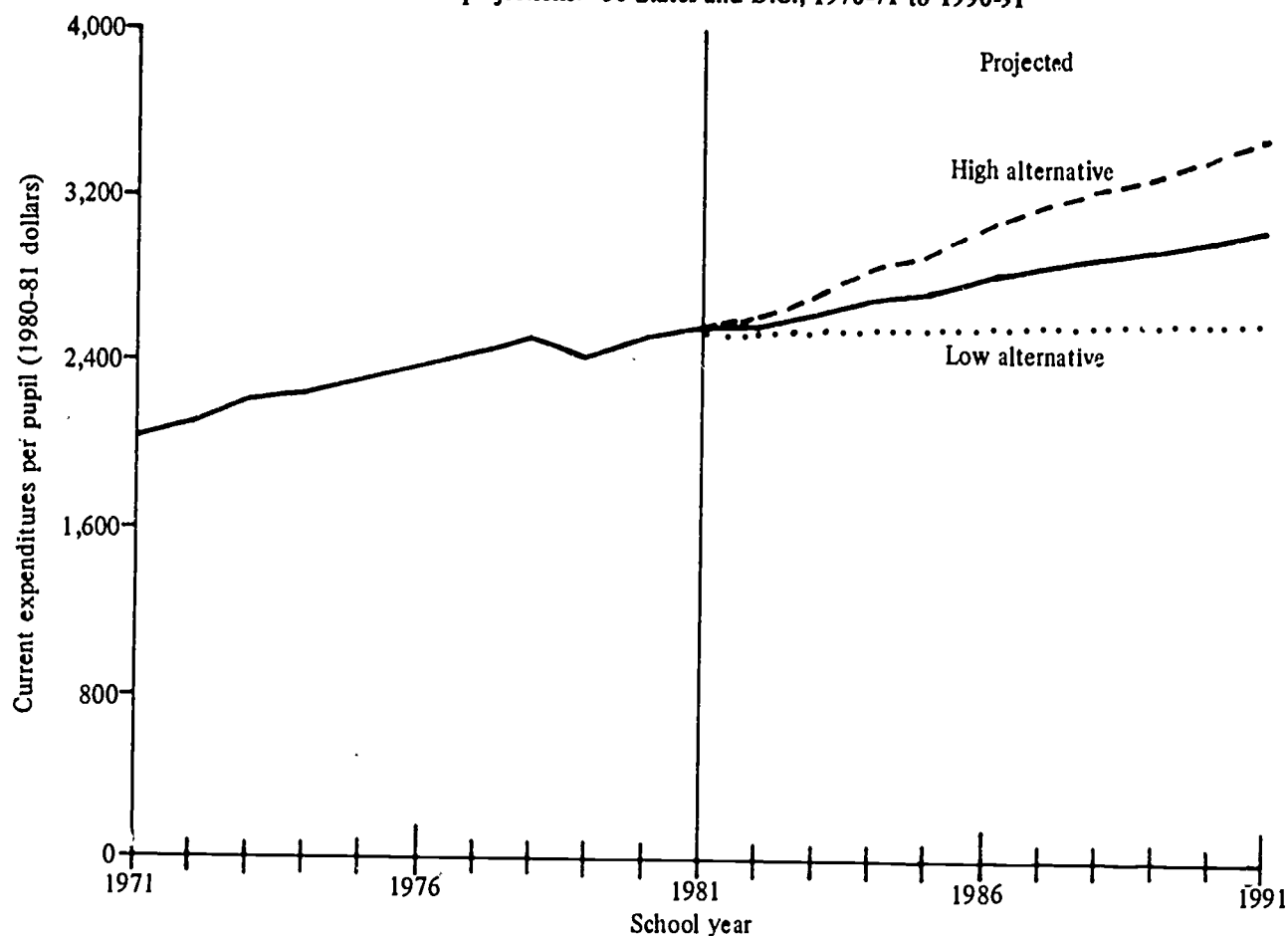


Figure 39.—Current expenditures per pupil in average daily attendance of public school systems, with alternative projections: 50 States and D.C., 1970-71 to 1990-91



\$6.1 billion. The high level could be realized if the enrollment increases of the late 1980's occur predominantly in areas that currently do not have adequate school plants to accommodate substantial growth.

## Interest

Expenditures for interest in real terms by public school systems decreased from \$2.8 billion in 1970-71 to \$2.1 billion in 1980-81. Interest did not decline as rapidly as capital outlay because interest expenditures continue 20 years or more after construction. As a result, debt incurred during the growth years of the 1950's and early 1960's kept interest expenditures high during the 1970's, when construction was declining rapidly.

During the 1980's, larger proportions of interest will result from debt incurred during the 1970's, when enrollment and construction decreased significantly. Therefore, interest expenditures are expected to continue declining, reaching \$1.8 billion by 1990-91. In the late 1980's, as construction begins to increase again due to enrollment increases, the rate of decline in interest expenditures is expected to lessen.

## Institutions of Higher Education

Total expenditures (excluding transfers and including current and capital expenditures) of institutions of higher education increased by 162 percent, from \$26.9 billion in 1970-71 to an estimated \$70.4 billion in 1980-81 (table 26). However, when these expenditures are adjusted to 1980-81 dollars (table 31), the \$70.4 billion expenditures in 1980-81 represent only a 17 percent increase over the 1970-71 adjusted expenditures of \$60.3 billion. This 17 percent increase is a result of a 29 percent increase in current expenditures combined with a 41 percent decrease in capital outlay.

During the 1980's, capital outlay is only expected to decrease slightly. Therefore, total expenditures will follow the pattern of current expenditures, which will increase slightly through 1982-83 and then begin to decline as full-time-equivalent enrollment (FTE) decreases. From 1980-81 to 1990-91, total expenditures in institutions of higher education are expected to fall from \$64.1 billion to \$60.6 billion in 1980-81 dollars (figure 42).

## Current Expenditures

During the 1970's, current expenditures in 1980-81 dollars rose from \$49.6 billion in 1970-71 to \$64.1 billion in 1980-81. This represents a 29 percent increase, the same as the increase in FTE during this period. However, this does not imply that educational costs at colleges increased at about the same rate as the cost of living during the decade.

As was the case for elementary and secondary schools, many factors contributed to real increases in the cost of education in institutions of higher education. These included rapid increases in the cost of fuel and supplies. And to a lesser extent than for elementary and secondary schools, Federal mandates, such as affirmative action and handicapped access, required colleges to make additional expenditures in the 1970's.

Therefore, it would seem reasonable that current expenditures would have increased more rapidly than FTE. One factor that kept this from occurring was the growth in FTE in 2-year institutions, which increased from 22.5 percent of total FTE in 1970 to 29.6 percent in 1980. Current expen-

diture per FTE is considerably lower in 2-year institutions than in 4-year institutions. In 1979-80, current fund expenditures (including mandatory transfers) per FTE was \$10,500 in universities, \$6,800 in other 4-year institutions and \$2,900 in 2-year institutions<sup>1</sup>.

Another factor that kept current expenditures from increasing more rapidly during the 1970's was the increased employment of part-time instructional staff. From 1970 to 1976, the full-time-equivalent of part-time instructional staff increased from 15 percent to 21 percent of total full-time-equivalent instructional staff (table 23). It is assumed that the cost of a full-time staff member is considerably higher than its equivalent in part-time staff.

During the 1980's, current expenditures are expected to decrease by 5.5 percent, from \$64.1 billion in 1980-81 to \$60.6 billion in 1990-91, a somewhat larger decrease than the 3.7 percent decline projected for FTE. This slight dif-

<sup>1</sup>W. Vance Grant and Leo J. Eiden, U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, Washington, D.C., 1982, forthcoming.

Figure 40.—Current expenditures for total and average annual salaries of classroom teachers in regular public elementary and secondary schools, with intermediate alternative projections: 50 States and D.C., 1970-71 to 1990-91

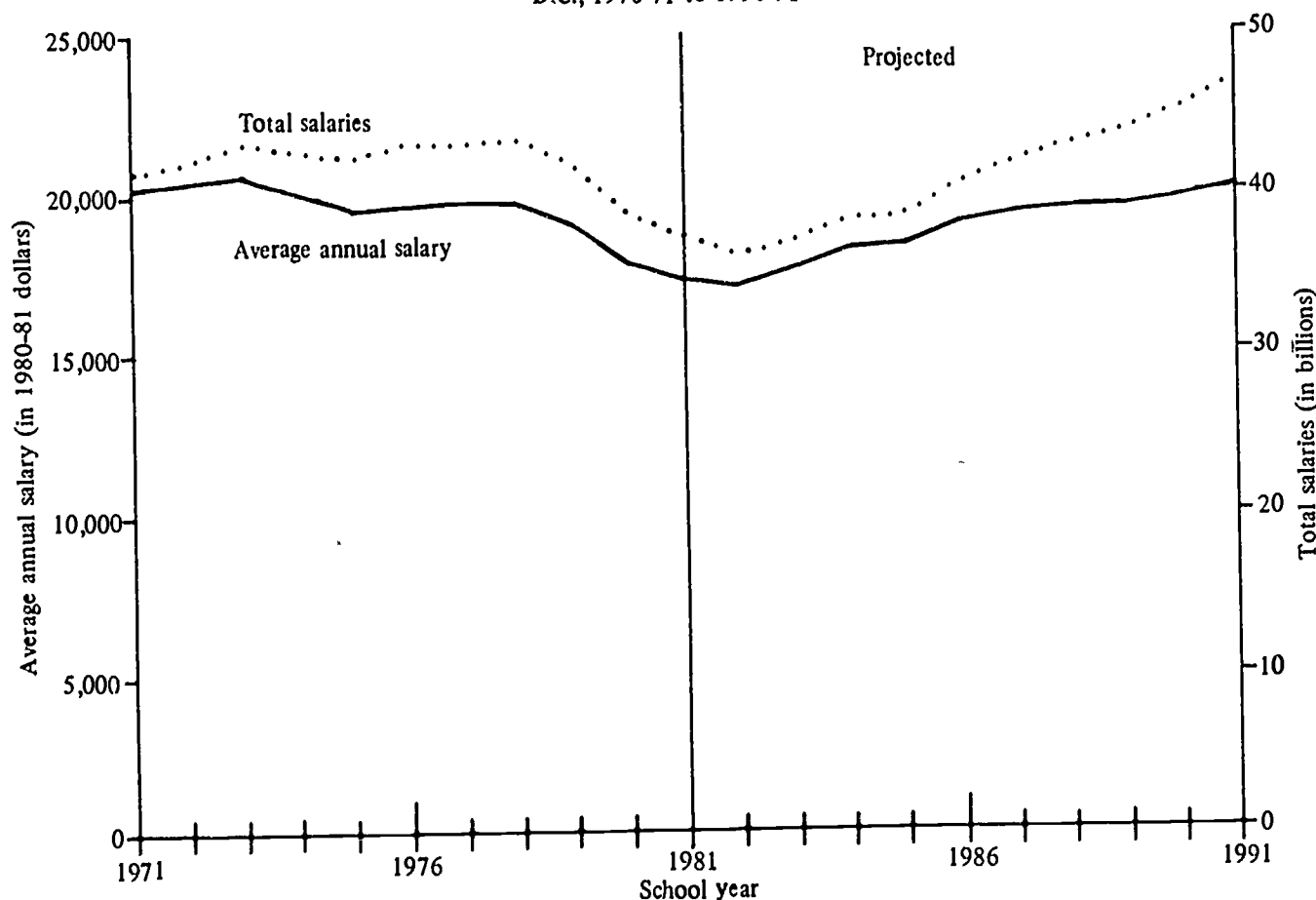


Figure 41.—Capital outlay of public school systems, with alternative projections: 50 States and D.C., 1970-71 to 1990-91

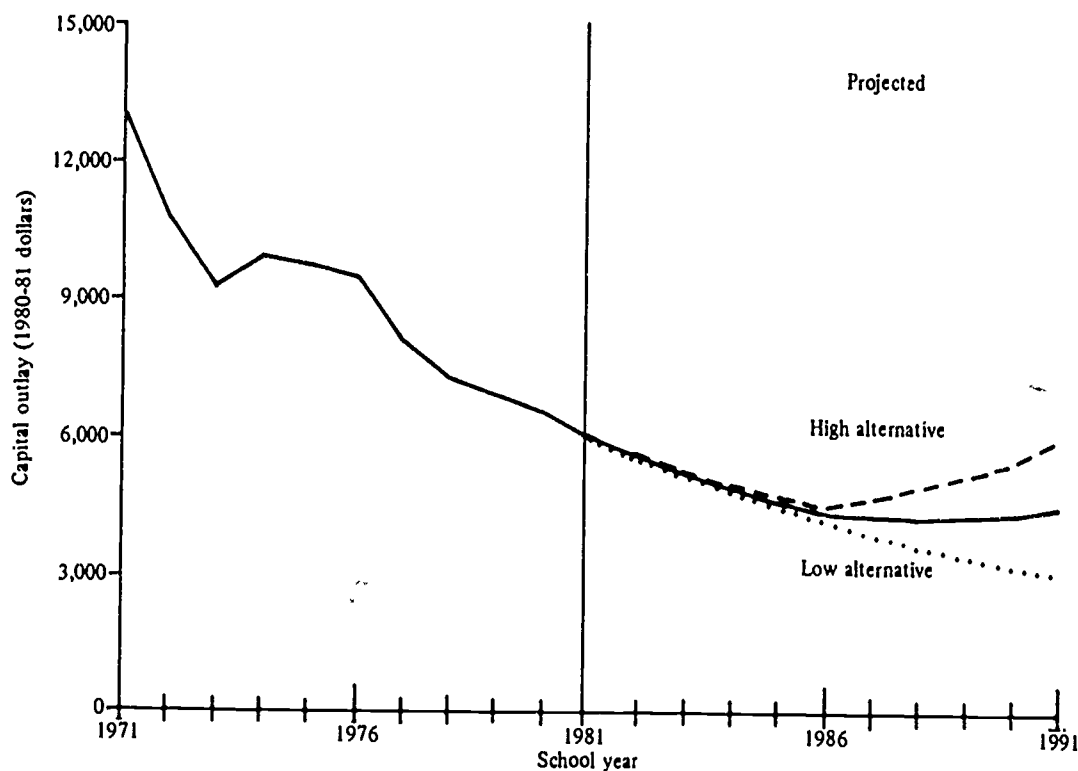
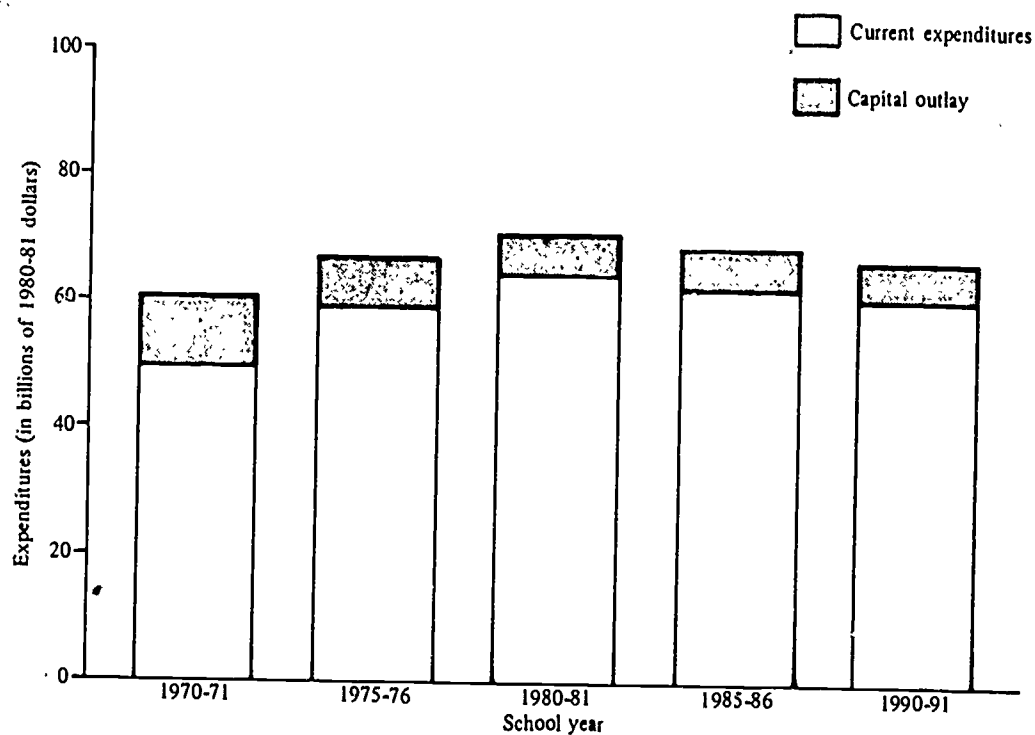


Figure 42.—Expenditures (in 1980-81 dollars) in institutions of higher education, with intermediate projections, by type: 50 States and D.C., 1970-71 to 1990-91



ference is due primarily to a projected 7.5 percent increase in FTE in 2-year institutions during the 1980's compared to an 8.3 percent decrease in 4-year institutions.

Educational and general expenditures, which are also shown in table 31, increased in 1980-81 dollars from \$40.9 billion in 1970-71 to \$50.6 billion in 1980-81 and are expected to fall to \$47.9 billion in 1990-91. Not surprisingly, this pattern is almost identical to that shown for total current expenditures, of which educational and general expenditures comprise about 80 percent.

The high and low alternative projections of total current expenditures shown in table 31 range from \$74.0 billion to \$53.6 billion in 1990-91 compared to the intermediate projection of \$60.6. These differences are due entirely to the alternative projections of FTE shown in table 14.

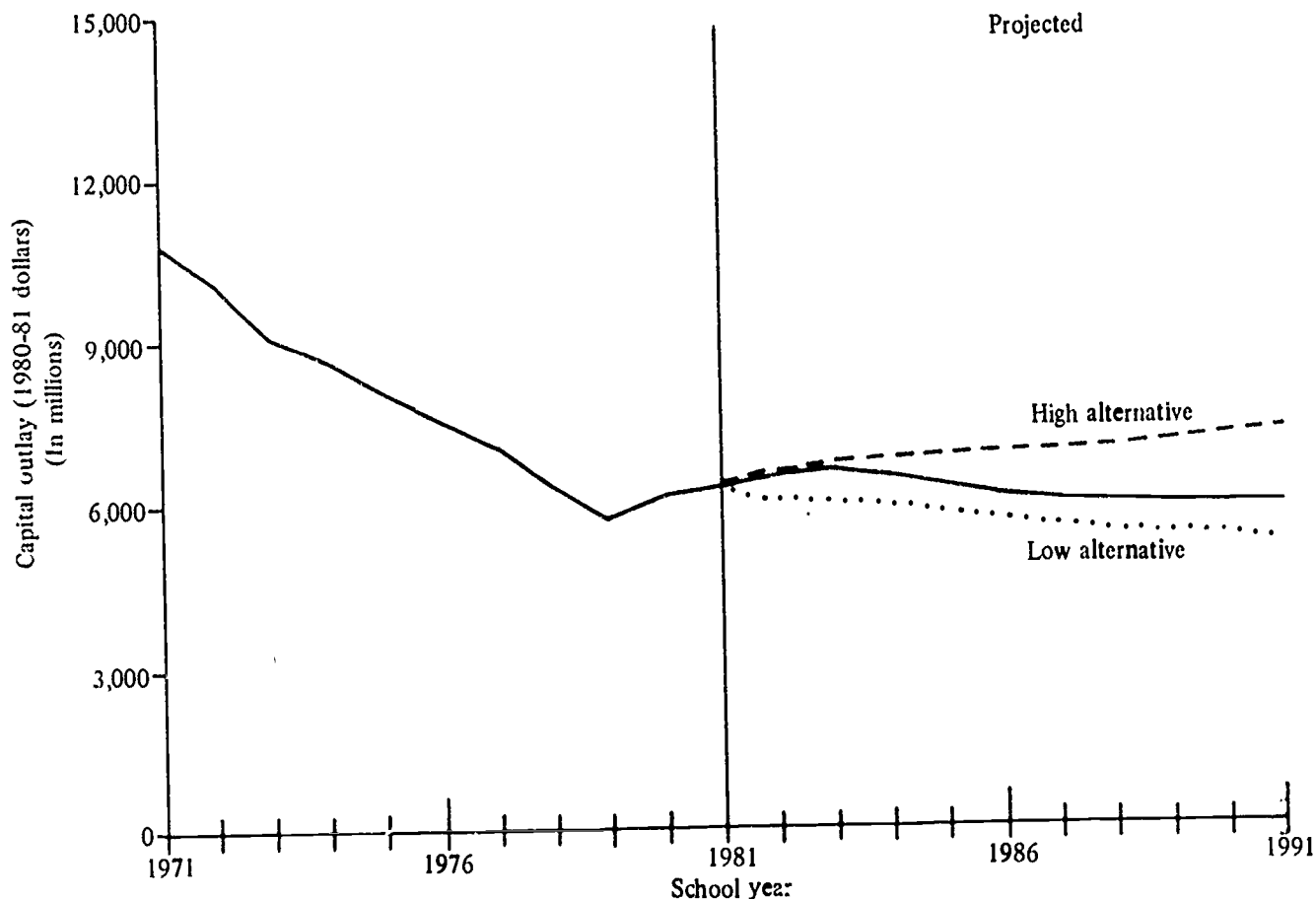
## Capital Outlay

During the 1970's, capital outlay decreased by more than 40 percent in 1980-81 dollars (from \$10.7 billion to \$6.3 billion) as the expansion of the physical plant to meet the educational demands of the baby boom came to an end

(figure 43). Almost 49 percent of the growth in total enrollment during the 1970's occurred among older part-time students, whose requirements for college facilities are considerably less than the requirements of the full-time traditional college-age students. The latter accounted for most of the enrollment increases during the 1960's.

During the 1980's, the enrollment of students under 25 years old is expected to decrease by 1.1 million, while the enrollment of students 25 years old and over is expected to increase by 1.1 million. As a result, capital outlay is expected to continue decreasing, from \$6.3 billion in 1980-81 to \$6.0 billion in 1990-91. This decrease would have been projected to be even greater during the 1980's, except for the increases in capital outlay that occurred in 1979-80 and 1980-81. It is believed that these increases occurred in response to rises in the enrollment of full-time, mostly younger students in 1979 and 1980, which occurred because of poor employment prospects for younger people during this period. This situation is expected to continue into the early 1980's, before capital outlay reverts to its downward trend of the 1970's.

Figure 43.—Capital outlay of institutions of higher education, with alternative projections: 50 States and D.C., 1970-71 to 1990-91



The high and low alternative projections in table 33 show a range of from \$7.3 billion to \$5.3 billion in 1990-91 compared to \$6.0 billion for the intermediate projection.

These differences are due entirely to the alternative projections of FTE shown in table 14.

120

**Table 25.—Expenditures (1980-81 dollars) of regular educational institutions, with alternative projections, by instructional level and control of institution: 50 States and D.C., 1970-71 to 1990-91**

(In billions of 1980-81 dollars)

Year and control	Total (all levels)	Elementary and secondary schools				Institution of higher education		
		Total	Current expend- itures	Capital outlay	Interest	Total	Current expend- itures	Capital outlay
1970-71								
Total .....	174.2	113.9	96.3	14.5	3.1	60.3	49.6	10.7
Public .....	141.6	102.0	86.2	13.0	2.8	39.6	31.8	7.8
Private .....	32.6	11.9	10.1	1.5	.3	20.7	17.8	2.9
1971-72								
Total .....	176.2	113.8	98.6	12.0	3.2	62.4	52.3	10.1
Public .....	143.3	102.3	88.6	10.8	2.9	41.0	33.6	7.4
Private .....	32.9	11.5	10.0	1.2	.3	21.4	18.7	2.7
1972-73								
Total .....	181.2	117.1	103.4	10.3	3.4	64.1	55.1	9.0
Public .....	148.0	105.6	93.2	9.3	3.1	42.4	35.7	6.7
Private .....	33.2	11.5	10.2	1.0	.3	21.7	19.4	2.3
1973-74								
Total .....	182.0	118.1	103.9	11.0	3.2	63.9	55.4	8.5
Public .....	149.3	106.4	93.6	9.9	2.9	42.9	36.5	6.4
Private .....	32.7	11.7	10.3	1.1	.3	21.0	18.9	2.1
1974-75								
Total .....	185.3	120.4	106.3	10.9	3.2	64.9	56.8	8.1
Public .....	152.3	108.4	95.7	9.8	2.9	43.9	38.0	5.9
Private .....	33.0	12.0	10.6	1.1	.3	21.0	18.8	2.2
1975-76								
Total .....	188.8	122.3	108.4	10.6	3.3	66.5	59.0	7.5
Public .....	155.4	110.0	97.5	9.5	3.0	45.4	39.7	5.7
Private .....	33.4	12.3	10.9	1.1	.3	21.1	19.3	1.8
1976-77								
Total .....	191.9	123.7	111.3	9.2	3.2	68.2	61.1	7.1
Public .....	157.0	110.8	99.7	8.2	2.9	46.2	41.1	5.1
Private .....	34.8	12.9	11.6	1.0	.3	21.9	20.0	1.9
1977-78								
Total .....	193.1	124.8	113.5	8.3	3.0	68.3	62.0	6.3
Public .....	157.6	111.6	101.5	7.4	2.7	46.0	41.4	4.6
Private .....	35.5	13.2	12.0	.9	.3	22.3	20.6	1.7
1978-79								
Total .....	191.0	122.9	112.3	7.8	2.8	68.1	62.4	5.7
Public .....	155.5	109.8	100.3	7.0	2.5	45.7	41.5	4.2
Private .....	35.5	13.1	12.0	.8	.3	22.4	20.9	1.5
1979-80								
Total .....	186.7	118.5	108.5	7.4	2.6	68.2	62.0	6.2
Public .....	150.8	105.5	96.6	6.6	2.3	45.3	41.2	4.1
Private .....	35.9	13.0	11.9	.8	.3	22.9	20.8	2.1
1980-81								
Total .....	188.3	117.9	108.7	6.8	2.4	70.4	64.1	6.3
Public .....	151.7	105.0	96.8	6.1	2.1	46.7	42.2	4.5
Private .....	36.7	12.9	11.9	.7	.3	23.8	21.9	1.9

See footnotes at end of table.

Table 25.—Expenditures (1980-81 dollars) of regular educational institutions, with alternative projections, by instructional level and control of institution: 50 States and D.C., 1970-71 to 1990-91—Continued  
(In billions of 1980-81 dollars)

Year and control	Total (all levels)	Elementary and secondary schools				Institution of higher education		
		Total	Current expend- itures	Capital outlay	Interest	Total	Current expend- itures	Capital outlay
Intermediate alternative projection								
1981-82								
Total . . . . .	188.6	116.0	107.4	6.4	2.2	72.6	66.1	6.5
Public . . . . .	151.5	103.2	95.5	5.7	2.0	48.3	43.7	4.6
Private . . . . .	37.1	12.8	11.9	.7	.2	24.3	22.4	1.9
1982-83								
Total . . . . .	189.8	116.6	108.4	6.0	2.2	73.2	66.6	6.6
Public . . . . .	152.3	103.5	96.2	5.3	2.0	48.8	44.1	4.7
Private . . . . .	37.5	13.1	12.2	.7	.2	24.4	22.5	1.9
1983-84								
Total . . . . .	190.3	118.2	110.4	5.6	2.2	72.1	65.6	6.5
Public . . . . .	153.0	104.9	97.9	5.0	2.0	48.1	43.5	4.6
Private . . . . .	37.3	13.3	12.5	.6	.2	24.0	22.1	1.9
1984-85								
Total . . . . .	189.1	118.9	111.5	5.3	2.1	70.2	63.9	6.3
Public . . . . .	152.2	105.4	98.8	4.7	1.9	46.8	42.3	4.5
Private . . . . .	36.9	13.5	12.7	.6	.2	23.4	21.6	1.8
1985-86								
Total . . . . .	190.2	122.0	114.9	5.0	2.1	68.2	62.1	6.1
Public . . . . .	153.8	108.2	101.9	4.4	1.9	45.6	41.2	4.4
Private . . . . .	36.5	13.8	13.0	.6	.2	22.7	20.9	1.8
1986-87								
Total . . . . .	192.6	125.1	118.1	5.0	2.0	67.5	61.4	6.1
Public . . . . .	155.7	110.8	104.6	4.4	1.8	44.9	40.6	4.3
Private . . . . .	36.9	14.3	13.5	.6	.2	22.6	20.8	1.8
1987-88								
Total . . . . .	195.3	128.2	121.2	5.0	2.0	67.1	61.1	6.0
Public . . . . .	158.2	113.4	107.2	4.4	1.8	44.8	40.5	4.3
Private . . . . .	37.1	14.8	14.0	.6	.2	22.3	20.6	1.7
1988-89								
Total . . . . .	197.5	130.7	123.7	5.0	2.0	66.8	60.8	6.0
Public . . . . .	160.4	115.7	109.5	4.4	1.8	44.7	40.4	4.3
Private . . . . .	37.1	15.0	14.2	.6	.2	22.1	20.4	1.7
1989-90								
Total . . . . .	201.1	134.2	127.2	5.0	2.0	66.9	60.9	6.0
Public . . . . .	163.5	118.7	112.5	4.4	1.8	44.8	40.5	4.3
Private . . . . .	37.6	15.5	14.7	.6	.2	22.1	20.4	1.7
1990-91								
Total . . . . .	205.4	138.8	131.6	5.2	2.0	66.6	60.6	6.0
Public . . . . .	167.4	122.8	116.4	4.6	1.8	44.6	40.4	4.2
Private . . . . .	37.9	16.0	15.2	.6	.2	21.9	20.2	1.7
Low alternative projection								
1981-82								
Total . . . . .	182.2	114.4	106.0	6.3	2.1	67.8	61.7	6.1
Public . . . . .	147.0	101.8	94.3	5.6	1.9	45.2	40.9	4.3
Private . . . . .	35.2	12.6	11.7	.7	.2	22.6	20.8	1.8

See footnotes at end of table.



**Table 25.—Expenditures (1980-81 dollars) of regular educational institutions, with alternative projections, by instructional level and control of institution: 50 States and D.C., 1970-71 to 1990-91—Continued**  
(In billions of 1980-81 dollars)

Year and control	Total (all levels)	Elementary and secondary schools				Institutions of higher education		
		Total	Current expend- itures	Capital outlay	Interest	Total	Current expend- itures	Capital outlay
1982-83								
Total .....	180.0	112.8	104.9	5.9	2.0	67.2	61.2	6.0
Public .....	145.0	100.1	93.1	5.2	1.8	44.9	40.6	4.3
Private .....	35.1	12.7	11.8	.7	.2	22.4	20.6	1.8
1983-84								
Total .....	178.5	111.9	104.4	5.5	2.0	66.6	60.6	6.0
Public .....	143.7	99.3	92.6	4.9	1.8	44.4	40.2	4.2
Private .....	34.7	12.6	11.8	.6	.2	22.1	20.4	1.7
1984-85								
Total .....	176.3	111.4	104.2	5.2	2.0	64.9	59.1	5.8
Public .....	142.3	98.8	92.4	4.6	1.8	43.5	39.3	4.2
Private .....	34.1	12.6	11.8	.6	.2	21.5	19.8	1.7
1985-86								
Total .....	175.2	111.7	105.0	4.8	1.9	63.5	57.8	5.7
Public .....	141.7	99.1	93.1	4.3	1.7	42.6	38.5	4.1
Private .....	33.5	12.6	11.9	.5	.2	20.9	19.3	1.6
1986-87								
Total .....	175.0	112.6	106.3	4.5	1.8	62.4	56.8	5.6
Public .....	141.5	99.7	94.1	4.0	1.6	41.8	37.8	4.0
Private .....	33.5	12.9	12.2	.5	.2	20.6	19.0	1.6
1987-88								
Total .....	174.8	113.5	107.6	4.2	1.7	61.3	55.8	5.5
Public .....	141.5	100.4	95.2	3.7	1.5	41.1	37.2	3.9
Private .....	33.3	13.1	12.4	.5	.2	20.2	18.6	1.6
1988-89								
Total .....	175.1	114.5	108.8	4.0	1.7	60.6	55.2	5.4
Public .....	142.0	101.3	96.3	3.5	1.5	40.7	36.8	3.9
Private .....	33.2	13.2	12.5	.5	.2	20.0	18.4	1.6
1989-90								
Total .....	176.1	115.7	110.3	3.7	1.7	60.4	55.0	5.4
Public .....	143.0	102.4	97.6	3.3	1.5	40.6	36.7	3.9
Private .....	33.2	13.3	12.7	.4	.2	19.9	18.3	1.6
1990-91								
Total .....	176.6	117.7	112.6	3.5	1.6	58.9	53.6	5.3
Public .....	143.4	104.1	99.6	3.1	1.4	39.3	35.6	3.7
Private .....	33.1	13.6	13.0	.4	.2	19.5	18.0	1.5
High alternative projection								
1981-82								
Total .....	190.7	117.3	108.5	6.4	2.4	73.4	66.8	6.6
Public .....	153.3	104.3	96.5	5.7	2.1	49.0	44.3	4.7
Private .....	37.4	13.0	12.0	.7	.3	24.4	22.5	1.9

See footnotes at end of table.

**Table 25.—Expenditures (1980-81 dollars) of regular educational institutions, with alternative projections, by instructional level and control of institution: 50 States and D.C., 1970-71 to 1990-91—Continued**  
(In billions of 1980-81 dollars)

Year and control	Total (all levels)	Elementary and secondary schools				Institutions of higher education		
		Total	Current expend- itures	Capital outlay	Interest	Total	Current expend- itures	Capital outlay
1982-83								
Total .....	195.4	120.5	112.1	6.0	2.4	74.9	68.2	6.7
Public .....	156.9	106.9	99.5	5.3	2.1	50.0	45.2	4.8
Private .....	38.6	13.6	12.6	.7	.3	25.0	23.0	2.0
1983-84								
Total .....	200.6	124.6	116.4	5.8	2.4	76.0	69.2	6.8
Public .....	161.2	110.4	103.2	5.1	2.1	50.8	46.0	4.8
Private .....	39.4	14.2	13.2	.7	.3	25.2	23.2	2.0
1984-85								
Total .....	203.1	126.5	118.7	5.4	2.4	76.6	69.7	6.9
Public .....	163.3	112.1	105.2	4.8	2.1	51.2	46.3	4.9
Private .....	39.8	14.4	13.5	.6	.3	25.4	23.4	2.0
1985-86								
Total .....	209.6	132.4	124.8	5.2	2.4	77.2	70.3	6.9
Public .....	169.0	117.4	110.7	4.6	2.1	51.6	46.7	4.9
Private .....	40.6	15.0	14.1	.6	.3	25.6	23.6	2.0
1986-87								
Total .....	215.2	137.8	130.0	5.4	2.4	77.4	70.4	7.0
Public .....	173.8	122.0	115.1	4.8	2.1	51.8	46.8	5.0
Private .....	41.4	15.8	14.9	.6	.3	25.6	23.6	2.0
1987-88								
Total .....	220.8	142.8	134.7	5.7	2.4	78.0	71.0	7.0
Public .....	178.6	126.2	119.1	5.0	2.1	52.4	47.4	5.0
Private .....	42.2	16.6	15.6	.7	.3	25.6	23.6	2.0
1988-89								
Total .....	226.1	146.9	138.5	6.0	2.4	79.2	72.1	7.1
Public .....	183.3	130.0	122.6	5.3	2.1	53.3	48.2	5.1
Private .....	42.8	16.9	15.9	.7	.3	25.9	23.9	2.0
1989-1990								
Total .....	233.1	152.5	143.9	6.2	2.4	80.6	73.4	7.2
Public .....	189.2	134.9	127.3	5.5	2.1	54.3	49.1	5.2
Private .....	44.0	17.6	16.6	.7	.3	26.4	24.3	2.1
1990-91								
Total .....	241.3	160.0	150.7	6.9	2.4	81.3	74.0	7.3
Public .....	196.2	141.5	133.3	6.1	2.1	54.7	49.5	5.2
Private .....	45.1	18.5	17.4	.8	.3	26.6	24.5	2.1

NOTE.—Because of rounding, details may not add to totals.

SOURCE: Data are a summary of tables 27 through 33.

**Table 26.—Expenditures (current dollars) of regular educational institutions, by instructional level and control of institution:  
50 States and D.C., 1970-71 to 1980-81  
(In billions of current unadjusted dollars)**

Year and control	Total (all levels)	Elementary and secondary schools				Institutions of higher education		
		Total	Current expend- itures	Capital outlay	Interest	Total	Current expend- itures	Capital outlay
1970-71								
Total .....	78.3	51.4	44.2	5.7	1.5	26.9	22.8	4.1
Public .....	63.6	46.0	39.6	5.1	1.3	17.6	14.6	3.0
Private .....	14.7	5.4	4.6	.6	.2	9.3	8.2	1.1
1971-72								
Total .....	82.7	53.6	47.0	5.0	1.6	29.1	24.9	4.2
Public .....	67.2	48.1	42.2	4.5	1.4	19.1	16.0	3.1
Private .....	15.5	5.5	4.8	.5	.2	10.0	8.9	1.1
1972-73								
Total .....	88.8	57.5	51.2	4.5	1.7	31.3	27.3	4.0
Public .....	72.6	51.9	46.2	4.1	1.5	20.7	17.7	3.0
Private .....	16.2	5.6	5.0	.4	.2	10.6	9.6	1.0
1973-74								
Total .....	97.6	63.4	56.1	5.6	1.7	34.2	29.9	4.3
Public .....	79.9	57.0	50.5	5.0	1.5	22.9	19.7	3.2
Private .....	17.7	6.4	5.6	.6	.2	11.3	10.2	1.0
1974-75								
Total .....	110.9	72.0	63.8	6.3	1.9	38.9	34.1	4.8
Public .....	91.1	64.8	57.4	5.7	1.7	26.3	22.8	3.5
Private .....	19.8	7.2	6.4	.6	.2	12.6	11.3	1.3
1975-76								
Total .....	120.9	78.3	69.6	6.6	2.1	42.6	37.9	4.7
Public .....	99.5	70.4	62.6	5.9	1.9	29.1	25.5	3.6
Private .....	21.5	7.9	7.0	.7	.2	13.6	12.4	1.2
1976-77								
Total .....	129.8	83.7	75.6	5.9	2.2	46.1	41.5	4.6
Public .....	106.3	75.0	67.7	5.3	2.0	31.3	27.9	3.4
Private .....	23.6	8.7	7.9	.6	.2	14.9	13.6	1.3
1977-78								
Total .....	139.7	90.3	82.3	5.8	2.2	49.4	44.9	4.5
Public .....	114.1	80.8	73.6	5.2	2.0	33.3	30.0	3.3
Private .....	25.6	9.5	8.7	.6	.2	16.1	14.9	1.2
1978-79								
Total .....	151.6	97.5	89.0	6.3	2.2	54.1	49.5	4.6
Public .....	123.4	87.1	79.5	5.6	2.0	36.3	32.9	3.4
Private .....	28.2	10.4	9.5	.7	.2	17.8	16.6	1.2
1979-80								
Total .....	167.6	106.3	97.5	6.6	2.2	61.3	55.7	5.6
Public .....	135.4	94.7	86.8	5.9	2.0	40.7	37.0	3.7
Private .....	32.2	11.6	10.7	.7	.2	20.6	18.7	1.9
1980-81								
Total .....	188.3	117.9	108.7	6.8	2.4	70.4	64.1	6.3
Public .....	151.7	105.0	96.8	6.1	2.1	46.7	42.2	4.5
Private .....	36.7	12.9	11.9	.7	.3	23.8	21.9	1.9

NOTE.—Because of rounding, details may not add to totals.

SOURCE: Data are a summary of tables 27 through 33.

Table 27.—Current expenditures of public school systems, with alternative projections:  
50 States and D.C., 1970-71 to 1990-91

Year	Average daily attendance (in thousands)	Allocated to pupil costs <sup>1</sup>				All programs <sup>2</sup> total (in billions)	
		Per pupil in average daily attendance		Total (in billions)		Current dollars	1980-81 dollars
		Current dollars	1980-81 dollars	Current dollars	1980-81 dollars		
1970-71.....	42,428	\$ 911	\$1,982	\$38.7	\$ 84.1	\$39.6	\$ 86.2
1971-72.....	42,254	990	2,078	41.8	87.8	42.2	88.6
1972-73.....	42,179	1,077	2,169	45.4	91.5	46.2	93.2
1973-74.....	41,438	1,207	2,235	50.0	92.6	50.5	93.6
1974-75.....	41,524	1,365	2,276	56.7	94.5	57.4	95.7
1975-76.....	41,274	1,509	2,343	62.1	96.7	62.6	97.5
1976-77.....	40,832	1,638	2,412	66.9	98.5	67.7	99.7
1977-78.....	40,080	1,821	2,515	73.1	100.7	73.6	101.5
1978-79.....	39,076	2,024	2,551	79.1	99.7	79.6	100.3
1979-80 <sup>3</sup> .....	38,253	2,256	2,510	86.3	96.0	86.8	96.6
1980-81 <sup>3</sup> .....	37,715	2,553	2,553	96.3	96.3	96.8	96.8
Intermediate alternative projection <sup>4</sup>							
1981-82.....	36,974	—	2,569	—	95.0	—	95.5
1982-83.....	36,380	—	2,631	—	95.7	—	96.2
1983-84.....	36,032	—	2,703	—	97.4	—	97.9
1984-85.....	35,916	—	2,737	—	98.3	—	98.8
1985-86.....	36,033	—	2,814	—	101.4	—	101.9
1986-87.....	36,300	—	2,868	—	104.1	—	104.6
1987-88.....	36,620	—	2,914	—	106.7	—	107.2
1988-89.....	36,945	—	2,950	—	109.0	—	109.5
1989-90.....	37,357	—	2,998	—	112.0	—	112.5
1990-91.....	37,966	—	3,053	—	115.9	—	116.4
Low alternative projection <sup>4</sup>							
1981-82.....	36,974	—	2,537	—	93.8	—	94.3
1982-83.....	36,380	—	2,545	—	92.6	—	93.1
1983-84.....	36,032	—	2,556	—	92.1	—	92.6
1984-85.....	35,916	—	2,559	—	91.9	—	92.4
1985-86.....	36,033	—	2,570	—	92.6	—	93.1
1986-87.....	36,300	—	2,579	—	93.6	—	94.1
1987-88.....	36,620	—	2,586	—	94.7	—	95.2
1988-89.....	36,945	—	2,593	—	95.8	—	96.3
1989-90.....	37,357	—	2,599	—	97.1	—	97.6
1990-91.....	37,966	—	2,610	—	99.1	—	99.6
High alternative projection <sup>4</sup>							
1981-82.....	36,974	—	2,596	—	96.0	—	96.5
1982-83.....	36,380	—	2,721	—	99.0	—	99.5
1983-84.....	36,032	—	2,850	—	102.7	—	103.2
1984-85.....	35,916	—	2,915	—	104.7	—	105.2
1985-86.....	36,033	—	3,058	—	110.2	—	110.7
1986-87.....	36,300	—	3,157	—	114.6	—	115.1
1987-88.....	36,620	—	3,239	—	118.6	—	119.1
1988-89.....	36,945	—	3,305	—	122.1	—	122.6
1989-90.....	37,357	—	3,394	—	126.8	—	127.3
1990-91.....	37,966	—	3,498	—	132.8	—	133.3

<sup>1</sup>Includes current expenditures made at the local level by local education agencies (LEA's), expenditures by State and other agencies for and on behalf of LEA's, and expenditures for State administration. Excludes current expenditures for community services.

<sup>2</sup>Includes current expenditures for community services in addition to current expenditures allowable to pupil costs.

<sup>3</sup>Current expenditure based on data from *Estimate of School Statistics, 1980-81*.

<sup>4</sup>For methodological details, see *Volume II of Projections of Education Statistics to 1990-91*.

NOTE.—Conversion to 1980-81 dollars was done on the basis of the Consumer Price Index. See appendix B, table B-2.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Revenues and Expenditures*; and National Education Association, *Estimates of School Statistics 1980-81*.

Table 28.—Current expenditures for salaries of classroom teachers in regular public elementary and secondary schools, with alternative projections: 50 States and D.C., 1970-71 to 1990-91

Year	Number of classroom teachers <sup>1</sup> (in thousands)	Salaries of classroom teachers			
		Average annual salary		Total (in billions)	
		Current dollars	1980-81 dollars	Current dollars	1980-81 dollars
1970-71 .....	2,055	\$ 9,269	\$20,168	\$19.0	\$41.4
1971-72 .....	2,063	9,705	20,380	20.0	42.0
1972-73 .....	2,103	10,176	20,533	21.4	43.2
1973-74 .....	2,138	10,778	19,974	23.0	42.7
1974-75 .....	2,165	11,690	19,500	25.3	42.2
1975-76 .....	2,196	12,591	19,615	27.6	43.1
1976-77 .....	2,186	13,355	19,669	29.2	43.0
1977-78 .....	2,209	14,213	19,604	31.4	43.3
1978-79 .....	2,206	15,043	18,970	33.2	41.8
1979-80 .....	2,181	15,966	17,764	34.8	38.7
1980-81 .....	2,163	17,264	17,264	37.3	37.3
Intermediate alternative projections <sup>2</sup>					
1981-82 .....	2,119	—	17,069	—	36.2
1982-83 .....	2,099	—	17,644	—	37.0
1983-84 .....	2,100	—	18,239	—	38.3
1984-85 .....	2,098	—	18,337	—	38.5
1985-86 .....	2,128	—	19,018	—	40.5
1986-87 .....	2,163	—	19,328	—	41.8
1987-88 .....	2,201	—	19,491	—	42.9
1988-89 .....	2,238	—	19,536	—	43.7
1989-90 .....	2,278	—	19,781	—	45.1
1990-91 .....	2,333	—	20,113	—	46.9
Low alternative projections <sup>2</sup>					
1981-82 .....	2,119	—	17,000	—	36.0
1982-83 .....	2,099	—	17,000	—	35.7
1983-84 .....	2,100	—	17,000	—	35.7
1984-85 .....	2,098	—	17,000	—	35.7
1985-86 .....	2,128	—	17,000	—	36.2
1986-87 .....	2,163	—	17,000	—	36.8
1987-88 .....	2,201	—	17,000	—	37.4
1988-89 .....	2,238	—	17,000	—	38.0
1989-90 .....	2,278	—	17,000	—	38.7
1990-91 .....	2,333	—	17,000	—	39.7
High alternative projections <sup>2</sup>					
1981-82 .....	2,119	—	17,137	—	36.3
1982-83 .....	2,099	—	18,288	—	38.4
1983-84 .....	2,100	—	19,477	—	40.9
1984-85 .....	2,098	—	19,673	—	41.3
1985-86 .....	2,128	—	21,036	—	44.8
1986-87 .....	2,163	—	21,655	—	46.8
1987-88 .....	2,201	—	21,982	—	48.4
1988-89 .....	2,238	—	22,071	—	49.4
1989-90 .....	2,278	—	22,562	—	51.4
1990-91 .....	2,333	—	23,225	—	54.2

<sup>1</sup>Data on number of classroom teacher from table 17.

<sup>2</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: National Education Association publication: *Estimates of School Statistics, 1980-81*.

NOTE.—Conversion to 1980-81 dollars was done on the basis of the Consumer Price Index. See appendix B, table B-2.

Table 29.—Expenditures for interest by public school systems, with alternative projections: 50 States and D.C., 1970-71 to 1990-91

(In millions)

Year	Total interest, including payments to school-housing authorities or similar agencies	
	Current dollars	1980-81 dollars
1970-71 .....	1,300	2,829
1971-72 .....	1,378	2,894
1972-73 .....	1,547	3,121
1973-74 .....	1,544	2,861
1974-75 .....	1,737	2,897
1975-76 .....	1,896	2,954
1976-77 .....	1,953	2,876
1977-78 .....	1,952	2,692
1978-79 .....	1,969	2,483
1979-80 <sup>1</sup> .....	2,040	2,270
1980-81 <sup>1</sup> .....	2,100	2,100
Intermediate alternative projections <sup>2</sup>		
1981-82 .....	—	2,004
1982-83 .....	—	1,953
1983-84 .....	—	1,955
1984-85 .....	—	1,932
1985-86 .....	—	1,877
1986-87 .....	—	1,843
1987-88 .....	—	1,817
1988-89 .....	—	1,793
1989-90 .....	—	1,780
1990-91 .....	—	1,769
Low alternative projections <sup>2</sup>		
1981-82 .....	—	1,908
1982-83 .....	—	1,806
1983-84 .....	—	1,810
1984-85 .....	—	1,763
1985-86 .....	—	1,653
1986-87 .....	—	1,585
1987-88 .....	—	1,533
1988-89 .....	—	1,486
1989-90 .....	—	1,460
1990-91 .....	—	1,438
High alternative projections <sup>2</sup>		
1981-82 .....	—	2,100
1982-83 .....	—	2,100
1983-84 .....	—	2,100
1984-85 .....	—	2,100
1985-86 .....	—	2,100
1986-87 .....	—	2,100
1987-88 .....	—	2,100
1988-89 .....	—	2,100
1989-90 .....	—	2,100
1990-91 .....	—	2,100

<sup>1</sup>Estimated on the basis of data from *Estimates of School Statistics, 1980-81*.

<sup>2</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Revenues and Expenditures*; National Education Association, *Estimates of School Statistics, 1980-81*.

NOTE.—Conversion to 1980-81 dollars was based on the Consumer Price Index. See appendix B, table B-2.

**Table 30.—Capital outlay of public school systems, with alternative projections: 50 States and D.C., 1970-71 to 1990-91**  
(In millions)

Year	Total capital outlay, including construction, equipment, etc.	
	Current dollars	1980-81 dollars
1970-71 .....	5,061	13,044
1971-72 .....	4,459	10,797
1972-73 .....	4,091	9,277
1973-74 .....	4,979	9,918
1974-75 .....	5,746	9,756
1975-76 .....	5,920	9,487
1976-77 .....	5,344	8,159
1977-78 .....	5,245	7,356
1978-79 .....	5,578	7,008
1979-80 <sup>1</sup> .....	5,935	6,602
1980-81 <sup>1</sup> .....	6,069	6,069
Intermediate alternative projections <sup>2</sup>		
1981-82 .....	—	5,677
1982-83 .....	—	5,297
1983-84 .....	—	4,997
1984-85 .....	—	4,707
1985-86 .....	—	4,443
1986-87 .....	—	4,390
1987-88 .....	—	4,358
1988-89 .....	—	4,382
1989-90 .....	—	4,425
1990-91 .....	—	4,600
Low alternative projections <sup>2</sup>		
1981-82 .....	—	5,615
1982-83 .....	—	5,247
1983-84 .....	—	4,918
1984-85 .....	—	4,601
1985-86 .....	—	4,286
1986-87 .....	—	3,991
1987-88 .....	—	3,731
1988-89 .....	—	3,508
1989-90 .....	—	3,308
1990-91 .....	—	3,136
High alternative projections <sup>2</sup>		
1981-82 .....	—	5,739
1982-83 .....	—	5,347
1983-84 .....	—	5,075
1984-85 .....	—	4,812
1985-86 .....	—	4,600
1986-87 .....	—	4,789
1987-88 .....	—	4,984
1988-89 .....	—	5,255
1989-90 .....	—	5,541
1990-91 .....	—	6,063

<sup>1</sup>Estimated on the basis of data from *Estimates of School Statistics, 1980-81*.

<sup>2</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

NOTE.—Conversion to 1980-81 dollars was done on the basis of the

Private Nonresidential Construction Price Index. See appendix B, table B-2.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Revenues and Expenditures*; National Education Association, *Estimates of School Statistics, 1980-81*.

**Table 31.—Total current expenditures, and educational and general expenditures (1980-81 dollars), by institutions of higher education, with alternative projections: 50 States and D.C., 1970-71 to 1990-91**

(In billions of 1980-81 dollars)

Year	Total current expenditures <sup>1</sup>			Educational and general <sup>2</sup>		
	Total	Public	Private	Total	Public	Private
1970-71 .....	49.6	31.8	17.8	40.9	26.8	14.1
1971-72 .....	52.3	33.6	18.7	42.8	28.3	14.5
1972-73 .....	55.1	35.7	19.4	45.4	30.5	14.9
1973-74 .....	55.4	36.5	18.9	45.7	31.1	14.6
1974-75 .....	56.8	38.0	18.8	45.2	31.4	13.8
1975-76 .....	59.0	39.7	19.3	46.9	32.7	14.2
1976-77 .....	61.1	41.1	20.0	48.0	33.4	14.6
1977-78 .....	62.0	41.4	20.6	49.1	34.1	15.0
1978-79 .....	62.4	41.5	20.9	49.3	34.0	15.3
1979-80 .....	62.0	41.2	20.8	48.7	33.5	15.2
1980-81 <sup>3</sup> .....	64.1	42.2	21.9	50.6	34.6	16.0
Intermediate alternative projections <sup>4</sup>						
1981-82 .....	66.1	43.7	22.4	52.2	35.8	16.4
1982-83 .....	66.6	44.1	22.5	52.7	36.2	16.5
1983-84 .....	65.6	43.5	22.1	52.1	35.7	16.4
1984-85 .....	63.9	42.3	21.6	50.5	34.7	15.8
1985-86 .....	62.1	41.2	20.9	49.1	33.8	15.3
1986-87 .....	61.4	40.6	20.8	48.5	33.3	15.2
1987-88 .....	61.1	40.5	20.6	48.3	33.2	15.1
1988-89 .....	60.8	40.4	20.4	48.0	33.1	14.9
1989-90 .....	60.9	40.5	20.4	48.1	33.2	14.9
1990-91 .....	60.6	40.4	20.2	47.9	33.1	14.8
Low alternative projections <sup>4</sup>						
1981-82 .....	61.7	40.9	20.8	48.7	33.5	15.2
1982-83 .....	61.2	40.6	20.6	48.4	33.3	15.1
1983-84 .....	60.6	40.2	20.4	47.9	33.0	14.9
1984-85 .....	59.1	39.3	19.8	46.7	32.2	14.5
1985-86 .....	57.8	38.5	19.3	45.7	31.6	14.1
1986-87 .....	56.8	37.8	19.0	44.9	31.0	13.9
1987-88 .....	55.8	37.2	18.6	44.1	30.5	13.6
1988-89 .....	55.2	36.8	18.4	43.7	30.2	13.5
1989-90 .....	55.0	36.7	18.3	43.5	30.1	13.4
1990-91 .....	53.6	35.6	18.0	42.4	29.2	13.2
High alternative projections <sup>4</sup>						
1981-82 .....	66.8	44.3	22.5	52.8	36.3	16.5
1982-83 .....	68.2	45.2	23.0	53.9	37.1	16.8
1983-84 .....	69.2	46.0	23.2	54.5	37.5	17.0
1984-85 .....	69.7	46.3	23.4	55.1	38.0	17.1
1985-86 .....	70.3	46.7	23.6	55.6	38.3	17.3
1986-87 .....	70.4	46.8	23.6	55.7	38.4	17.3
1987-88 .....	71.0	47.4	23.6	56.2	38.9	17.3
1988-89 .....	72.1	48.2	23.9	57.0	39.5	17.5
1989-90 .....	73.4	49.1	24.3	58.1	40.3	17.8
1990-91 .....	74.0	49.5	24.5	58.5	40.6	17.9

<sup>1</sup>Excludes mandatory transfers from current funds.

<sup>2</sup>Includes current fund expenditures for student education, research, scholarships and fellowships, and public services. Excludes auxiliary enterprises, mandatory transfers, and hospitals and independent operations.

<sup>3</sup>Estimated.

<sup>4</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

NOTE.—Because of rounding, details may not add to totals.

SOURCE. U.S. Department of Education, National Center for Education Statistics, *Financial Statistics of Institutions of Higher Education*.



Table 32.—Total current expenditures, and educational and general expenditures (current dollars), by institutions or higher education: 50 States and D.C., 1970-71 to 1980-81

(In billions of current dollars)

Year	Total current expenditures <sup>1</sup>			Educational and general <sup>2</sup>		
	Total	Public	Private	Total	Public	Private
1970-71 .....	22.8	14.6	8.2	18.7	12.3	6.5
1971-72 .....	24.9	16.0	8.9	20.4	13.5	6.9
1972-73 .....	27.3	17.7	9.6	22.5	15.1	7.4
1973-74 .....	29.9	19.7	10.2	24.7	16.8	7.9
1974-75 .....	34.1	22.8	11.3	27.1	18.8	8.3
1975-76 .....	37.9	25.5	12.4	30.1	21.0	9.1
1976-77 .....	41.5	27.9	13.6	32.6	22.7	9.9
1977-78 .....	44.9	30.0	14.9	35.6	24.7	10.9
1978-79 .....	49.5	32.9	16.6	39.1	27.0	12.1
1979-80 .....	55.7	37.0	18.7	43.8	30.2	13.7
1980-81 <sup>3</sup> .....	64.1	42.2	21.9	50.6	34.6	16.0

<sup>1</sup>Excludes mandatory transfers from current funds.

<sup>2</sup>Includes current fund expenditures for student education, research, scholarships and fellowships, and public services. Excludes auxiliary enterprises, mandatory transfers, and hospitals and independent operations.

<sup>3</sup>Estimated.

NOTE.—Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Financial Statistics of Institutions of Higher Education*.

Table 33.—Capital outlay of institutions of higher education, with alternative projections: 50 States and D.C., 1970-71 to 1990-91

(In millions)

Year	Total		Public		Private	
	Current dollars	1980-81 dollars	Current dollars	1980-81 dollars	Current dollars	1980-81 dollars
1970-71 .....	4,165	10,737	3,032	7,814	1,134	2,923
1971-72 .....	4,163	10,079	3,054	7,394	1,109	2,685
1972-73 .....	3,967	8,998	2,940	6,667	1,028	2,331
1973-74 <sup>1</sup> .....	4,251	8,468	3,211	6,396	1,040	2,072
1974-75 .....	4,760	8,082	3,476	5,902	1,284	2,180
1975-76 .....	4,702	7,536	3,552	5,693	1,150	1,843
1976-77 .....	4,623	7,058	3,362	5,133	1,261	1,925
1977-78 .....	4,527	6,348	3,306	4,636	1,221	1,712
1978-79 .....	4,576	5,748	3,377	4,242	1,199	1,506
1979-80 .....	5,551	6,175	3,665	4,076	1,886	2,098
1980-81 <sup>1</sup> .....	6,322	6,322	4,463	4,463	1,859	1,859
Intermediate alternative projections <sup>2</sup>						
1981-82 .....	—	6,524	—	4,622	—	1,902
1982-83 .....	—	6,600	—	4,676	—	1,924
1983-84 .....	—	6,481	—	4,587	—	1,894
1984-85 .....	—	6,309	—	4,472	—	1,837
1985-86 .....	—	6,136	—	4,352	—	1,784
1986-87 .....	—	6,059	—	4,300	—	1,759
1987-88 .....	—	6,008	—	4,266	—	1,742
1988-89 .....	—	5,992	—	4,258	—	1,734
1989-90 .....	—	5,997	—	4,264	—	1,733
1990-91 .....	—	5,958	—	4,238	—	1,720
Low alternative projections <sup>2</sup>						
1981-82 .....	—	6,084	—	4,316	—	1,768
1982-83 .....	—	6,042	—	4,289	—	1,753
1983-84 .....	—	5,965	—	4,237	—	1,728
1984-85 .....	—	5,844	—	4,153	—	1,691
1985-86 .....	—	5,715	—	4,065	—	1,650
1986-87 .....	—	5,583	—	3,974	—	1,609
1987-88 .....	—	5,495	—	3,915	—	1,580
1988-89 .....	—	5,443	—	3,881	—	1,562
1989-90 .....	—	5,421	—	3,870	—	1,551
1990-91 .....	—	5,279	—	3,745	—	1,534
High alternative projections <sup>2</sup>						
1981-82 .....	—	6,596	—	4,675	—	1,921
1982-83 .....	—	6,722	—	4,768	—	1,954
1983-84 .....	—	6,830	—	4,848	—	1,982
1984-85 .....	—	6,883	—	4,890	—	1,993
1985-86 .....	—	6,926	—	4,926	—	2,000
1986-87 .....	—	6,960	—	4,954	—	2,006
1987-88 .....	—	7,009	—	4,994	—	2,015
1988-89 .....	—	7,105	—	5,068	—	2,037
1989-90 .....	—	7,229	—	5,163	—	2,066
1990-91 .....	—	7,309	—	5,224	—	2,085

<sup>1</sup> Estimated.

<sup>2</sup> For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Financial Statistics of Institutions of Higher Education*.

NOTE.—Conversion to 1980-81 dollars was based on the Private Non-residential Construction Price Index.

# **Appendixes**

# Appendix A

## General Methodology

This section provides only a general description of the major forecasting techniques used to produce the projections shown in this volume. Detail information describing the projection methodology, basic assumptions, estimation methods and definitions of statistical universes are shown in Volume II, *Methodological Report*.

Projections of enrollments in elementary and secondary schools are based on a grade-retention or cohort-survival method. This is one of the most commonly used techniques for making projections of enrollments at this level. The method is based on the entrance of 6-year-olds into first grade and their subsequent progress through elementary and secondary school as determined by projected grade-retention rates.

Kindergarten, first-grade, elementary and secondary ungraded and special, and postgraduate enrollments are projected separately. Grades 2 through 12 are projected on the basis of grade-retention rates.

Projections of classroom teachers and current expenditures in elementary and secondary schools are projected on the basis of projected enrollments in these schools. Projections of teacher-pupil ratios and projections of current expenditures per pupil are applied to enrollment projections to obtain projections of classroom teachers and current expenditures in elementary and secondary schools.

Projections, such as those for teacher-pupil ratios and current expenditures per pupil, are based on standard forecasting methods, such as exponential smoothing and multiple linear regression. For example, the low alternative projection of teacher-pupil ratios in public elementary schools was computed by means of multiple linear regression with per capita income, the absolute value of annual enrollment declines, and a dummy variable representing the Education of All Handicapped Students Law as independent variables. The high alternative projection was determined by means of double exponential smoothing with a low smoothing constant, while the intermediate alternative projection was computed as the average of the high and low alternatives. Therefore, the high and low

alternative projections do not provide a statistical confidence interval about the intermediate alternative projection, but instead represent the authors' subjective judgment as to the reasonable upper and lower limits for each series.

Projections of enrollments in institutions of higher education were developed by means of NCES' interactive forecasting model (IFMOD). Although IFMOD is fairly complex, the model essentially is an age-specific enrollment rate model. For each age or age group by sex and attendance status, enrollment rates are calculated and projected into the future, primarily by means of exponential smoothing techniques. These projected enrollment rates were then applied to age-specific population projections from the Bureau of the Census. Since projections of enrollment in institutions of higher education are much less reliable than projections of enrollments in elementary and secondary schools, alternative higher education enrollment projections are computed based on alternative age-specific enrollment rates.

Projections of instructional staff and current expenditures in institutions of higher education are based on projections of staff-student ratios and current expenditures per pupil. Since these rates have been fairly stable, they were projected as the average of the most recent rates. The projections of staff-student ratios and current expenditures per pupil were then applied to the alternative enrollment projections to obtain alternative projections of instructional staff and current expenditures in institutions of higher education.

Projections of high school graduates are based on projections of the average of the 17- and 18-year-old population and projections of degrees by level are based on projections of enrollments in institutions of higher education. For example, projections of bachelor's degrees were estimated by means of simple linear regression with first-year undergraduate enrollment in 4-year institutions as the independent variable.

## **Appendix B**

### **Statistical Tables**

Table B-1.—Total enrollment in all institutions of higher education, with base-line alternative projections, by sex and attendance status of students and control of institutions: 50 States and D.C., fall 1970 to 1990

(In thousands)

Year (fall)	Total enrollment	Sex		Attendance status		Control	
		Men	Women	Full-time	Part-time	Public	Private
1970 .....	8,581	5,044	3,537	5,815	2,766	6,428	2,153
1971 .....	8,949	5,207	3,742	6,077	2,871	6,804	2,144
1972 .....	9,215	5,239	3,976	6,072	3,142	7,071	2,144
1973 .....	9,602	5,371	4,231	6,189	3,413	7,420	2,183
1974 .....	10,224	5,622	4,601	6,370	3,853	7,989	2,235
1975 .....	11,185	6,149	5,036	6,841	4,344	8,835	2,350
1976 .....	11,012	5,811	5,201	6,717	4,295	8,653	2,359
1977 .....	11,286	5,789	5,497	6,793	4,493	8,847	2,437
1978 .....	11,259	5,640	5,619	6,667	4,592	8,784	2,475
1979 .....	11,570	5,683	5,887	6,793	4,776	9,037	2,533
1980 .....	12,097	5,874	6,223	7,098	4,999	9,457	2,640
Projected <sup>1</sup>							
1981 .....	12,101	5,961	6,140	7,038	5,063	9,506	2,595
1982 .....	12,201	5,991	6,210	7,040	5,161	9,595	2,606
1983 .....	12,238	5,991	6,247	6,988	5,250	9,636	2,602
1984 .....	12,218	5,960	6,258	6,892	5,326	9,632	2,586
1985 .....	12,174	5,917	6,257	6,781	5,393	9,612	2,562
1986 .....	12,120	5,865	6,255	6,669	5,451	9,584	2,536
1987 .....	12,093	5,823	6,270	6,601	5,492	9,576	2,517
1988 .....	12,098	5,802	6,296	6,585	5,513	9,591	2,507
1989 .....	12,139	5,803	6,336	6,593	5,546	9,636	2,503
1990 .....	12,101	5,770	6,331	6,536	5,565	9,616	2,485

<sup>1</sup>For methodological details, see Volume II of *Projections of Education Statistics to 1990-91*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Fall Enrollment in Higher Education*.

NOTE.—Because of rounding, details may not add to totals.

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Table B-2.—Constant dollar indexes,<sup>1</sup> 1970-71 to 1980-81 (1980-81 = 1.000)

School year	Consumer Price Index <sup>2</sup>	Private Nonresidential Construction Index <sup>3</sup>
1970-71 .....	.460	.388
1971-72 .....	.476	.413
1972-73 .....	.496	.441
1973-74 .....	.540	.502
1974-75 .....	.600	.589
1975-76 .....	.642	.624
1976-77 .....	.679	.655
1977-78 .....	.725	.713
1978-79 .....	.793	.796
1979-80 .....	.899	.899
1980-81 .....	1.000	1.000

<sup>1</sup>For each series, the monthly indexes were averaged on a July to June basis in order to correspond to the school year.

<sup>2</sup>All Urban Consumer Price Index.

<sup>3</sup>Implicit Price Deflator for Private Nonresidential Construction.

# Appendix C

## GLOSSARY

### Degrees

#### Associate Degrees

Degrees and awards based on less than 4 years of work beyond high school.

#### Bachelor's or First-Level Degree

Lowest degree conferred by a college, university, or professional school requiring 4 or more years of academic work.

#### Doctor's Degree (Except First-Professional)

Highest academic degree conferred by a university, including Ph.D. in any field, doctor of education, doctor of juridical science, and doctor of public health (preceded by professional degree in medicine or sanitary engineering).

#### First-Professional Degree

An academic degree which requires at least 2 academic years of previous college work for entrance and at least 6 academic years of college work for completion. This classification includes only degrees in the following fields of study: Law (LL.B. or J.D.); dentistry (D.D.S. or D.M.D.); medicine (M.D.); veterinary medicine (D.V.M.); chiropody or podiatry (D.S.C. or D.P.); optometry (O.D.); osteopathy (D.O.); theology (B.D.); chiropractic (D.C. or D.C.M.); and pharmacy (D.Pharm.).

#### Master's or Second-Level Degree

An academic degree higher than a bachelor's but lower than a doctor's. All degrees classified as first-professional are excluded.

### Enrollment

#### Adult Basic and Secondary Enrollment

The enrollment in programs that will enable adults to acquire basic skills, continue their education through the completion of secondary school, and enable them to become more employable, productive and responsible citizens.

#### First-Professional Enrollment

The enrollment in programs leading to a first-professional degree.

#### First-Year Graduate Enrollment

The enrollment of graduate students who have not received credit for completing a full year toward a master's or doctor's degree.

#### Full-Time-Equivalent Enrollment

The enrollment of full-time students plus the enrollment of part-time students converted to the equivalent number of full-time students.

#### Full-Time Enrollment

The enrollment of students taking courses with credits equal to at least 75 percent of the normal full-time semester courses load.

#### Fourth Year and Beyond Undergraduate Enrollment

The enrollment of undergraduate students who have completed 3 or more years toward a bachelor's degree.

#### Graduate Enrollment

The enrollment of students who have attained at least one bachelor's or first-professional degree and who are enrolled in courses creditable toward a master's or doctor's degree.

#### Noncollegiate Postsecondary Enrollment

The enrollment in postsecondary institutions that are not institutions of higher education. Primarily, these institutions offer occupational education.

#### Non-Credit Enrollment

The enrollment of students who receive no credit toward a formal degree or award. This enrollment is excluded from the enrollment in institutions of higher education shown in *Projections*.



## **Post-Baccalaureate Enrollment**

Graduate enrollment plus first-professional enrollment.

## **Unclassified Enrollment**

The enrollment of students taking courses creditable toward a degree or other formal award but who are not enrolled in such programs.

## **Undergraduate Enrollment**

The enrollment of students taking courses creditable toward a bachelor's degree or other formal award below the bachelor's degree level.

## **Expenditures**

### **Capital Outlay**

Expenditures for land or existing buildings, improvement of grounds, construction of buildings, additions to buildings, and initial or additional equipment. Includes replacement and rehabilitation, and installment or lease payments (excluding interest) which have a terminal date and result in the acquisition of property.

### **Constant Dollars (1980-81)**

Expenditures data which are adjusted by means of price and cost indexes to equal the purchasing power of 1980-81 dollars. This eliminates inflationary factors and allows direct comparison between years.

### **Current Dollars**

Expenditure data which are not adjusted to compensate for inflation. (Projections of unadjusted expenditures are not included in this report.)

### **Current Expenditures**

Any expenditure except for capital outlay and debt service. Mandatory transfers are excluded for institutions of higher education.

### **Debt Service**

Payment for retirement of debt and for use of long-term loans (not repaid in the year made).

### **Education and General Expenditures**

Current expenditures for student education, research, scholarships and fellowships, and public services. Current expenditures for auxiliary enterprises, hospitals and independent operation and mandatory transfers are excluded.

## **Mandatory Transfers**

All transfers from "Current Funds" which must be made to other fund groups in order to fulfill a binding legal obligation of the institution.

## **Instructional Staff**

### **Instructor or Above**

A faculty member with the title of professor, associate professor, assistant professor, instructor, lecturer, visiting professor, adjunct professor, or interim professor (or its equivalent).

### **Junior Instructor**

A professional assistant to an instructor or above. Junior staff members are usually graduate students with titles such as graduate assistant or teaching fellow.

### **Full-Time-Equivalent Instructional Staff**

All full-time instructional staff plus part-time instructional staff converted to the equivalent number of full-time instructional staff.

### **New Teacher Graduates**

Bachelor's or master's degree recipients who are qualified to teach for the first time.

## **Schools**

### **Elementary Schools**

Schools with teaching primarily organized by grades, composed of a span of grades not above grade eight.

### **Independent Nursery and Kindergarten Schools.**

Schools that offer nursery and/or kindergarten instruction only.

### **Institutions of Higher Education**

Postsecondary institutions that are legally authorized to offer at least a one-year program of college-level studies leading toward a degree.

### **Secondary Schools**

Schools with teaching organized by subject matter taught, composed of junior high and high schools.